# grass valley

# Encore
## CONTROL SYSTEM

## Configuration Manual

Software Version 1.7.4.1

www.grassvalley.com

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**FAQ Database** — Solutions to problems and troubleshooting efforts can be found by searching our Frequently Asked Questions (FAQ) database.

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# *Preface*

## About This Manual

This *Encore Configuration Manual* is designed for facility engineers who are involved in Encore system installation, configuration, and servicing.

### Documentation Set

The basic Encore documentation set consists of:

- *Installation and Service Manual*,

- *Configuration Manual*,

- *Control Panels Operation Manual*, and

- *Release Notes*.

The *Installation and Service Manual* contains information about installing Encore system hardware, maintaining Encore system components, and configuring network communications used by the system.

The *Configuration Manual* contains detailed information about configuring an Encore system to meet the needs of your facility. Background information about Encore system design is included, and a description of the Encore Operator User Interface (OUI); which is used to configure, test, and operate the system; is also provided.

The *Control Panels Operation Manual* provides operating information for the control panels used with the Encore Control System.

The *Release Notes* contain information about new features and system enhancements for a specific software version. Software installation procedures are also provided. Always review the Release Notes for your current system software before you begin working with your Encore system.

## Additional Documentation

Documentation for various Encore system options is also available:

- *Encore Soft Panels Instruction Manual*, and

- *Encore Salvo Editor Instruction Manual*.

The NetConfig utility program is used to configure your Encore network and install software:

- *NetConfig Instruction Manual*

Software engineering documentation, intended for third-party developers and in-house software engineers, is also available:

- *Routing Products Protocols Manual*.

# Encore System Overview

**Note** This same Overview section is included in several Encore manuals. If you are familiar with this material you can skip to the next section.

## Introduction

The Encore system is an open, scalable platform for full router and facility control. Featuring tight integration with Grass Valley router matrices, third-party routers, automation systems, and other equipment, the Encore system can consolidate media assets under a single, unified control system.

*Figure 1. Encore Facility Control System*
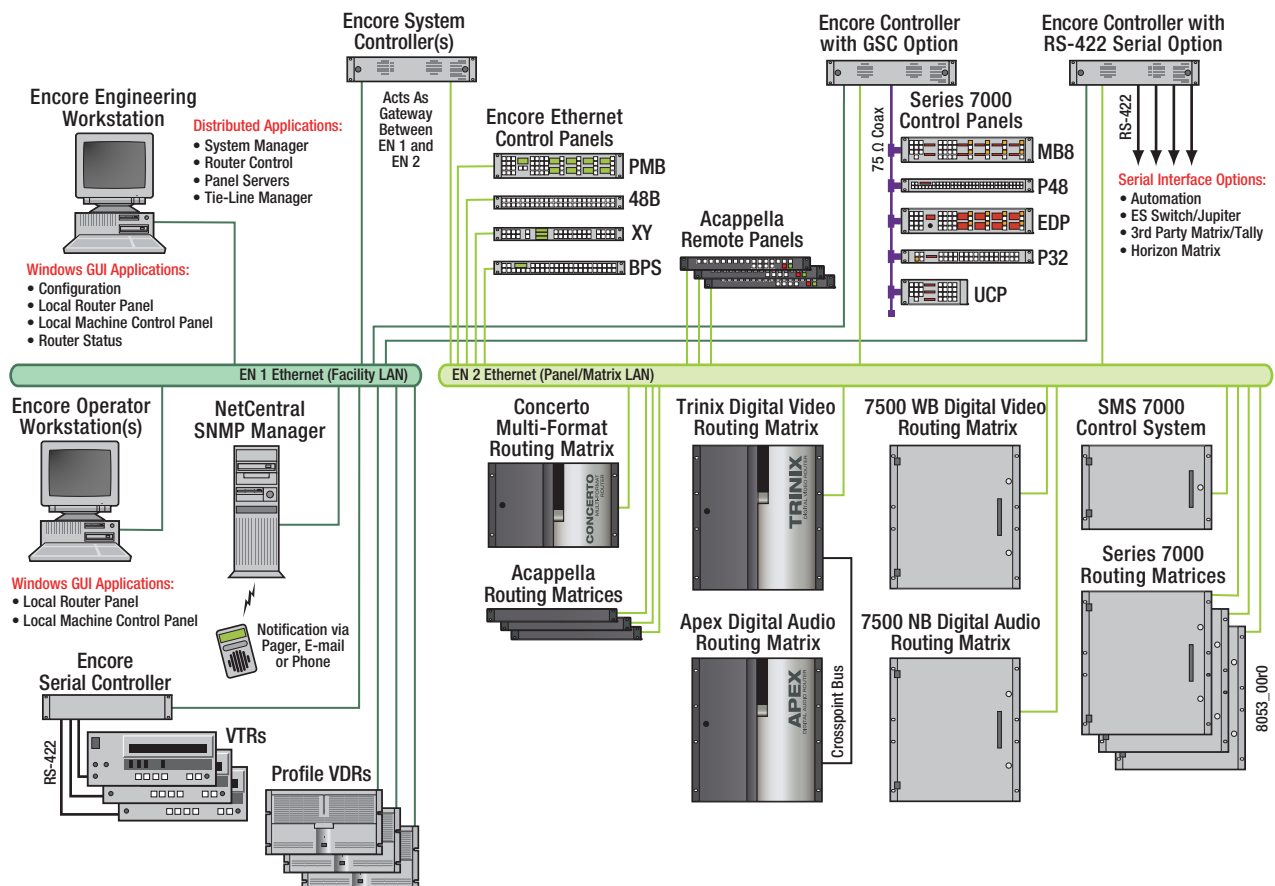
The Encore system modular design lets broadcasters and other high-quality content creators select just the level of control they need. At its most basic, the Encore system can configure and control the crosspoints of a single routing matrix, but it can be expanded to control multiple matrices.

## Controlled Hardware

Encore can control a wide range of Grass Valley routers including Trinix, Apex, Concerto, Acappella, 7500 WB, and 7500 NB using Ethernet. Legacy 7000 Series and Horizon routers can be serially controlled. In addition, Encore can control the popular Grass Valley Venus routers with a serial interface to a VM-3000 protocol translator. A wide range of third party routers can also be controlled through a number of supported serial interfaces. Users can also add tally and machine control via Ethernet or serial interfaces.

## Encore System Controller Frame

The two rack-unit Encore System Controller Frame supports up to two System Controller Board (SCB) modules and two power supply modules for redundancy. A standard Encore System Controller Frame is equipped with one SCB and one power supply. All modules are front removable and hot pluggable. Cooling is built into the frame so no external cooling units are required.

*Figure 2.  Encore System Controller Frame*
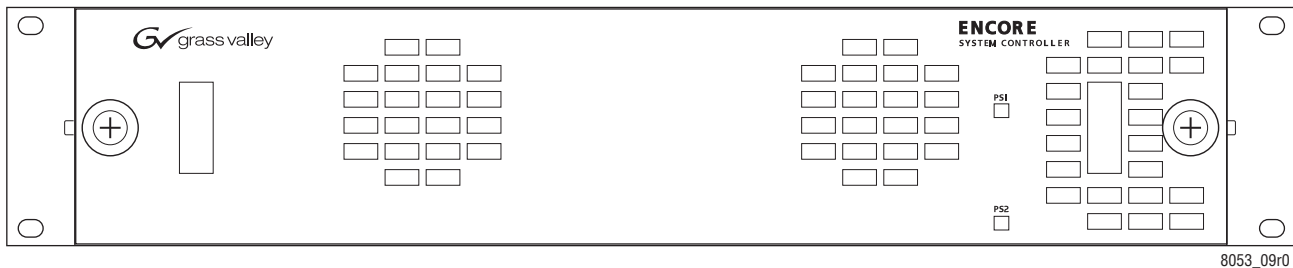


8053_09r0

The System Controller Frame has two slots for SCBs and two slots for Power Supply modules, located behind the front cover/air filter. Status indicator LEDs and a reset button are located on each SCB (Figure 3).

*Figure 3. System Controller and Power Supply Modules*
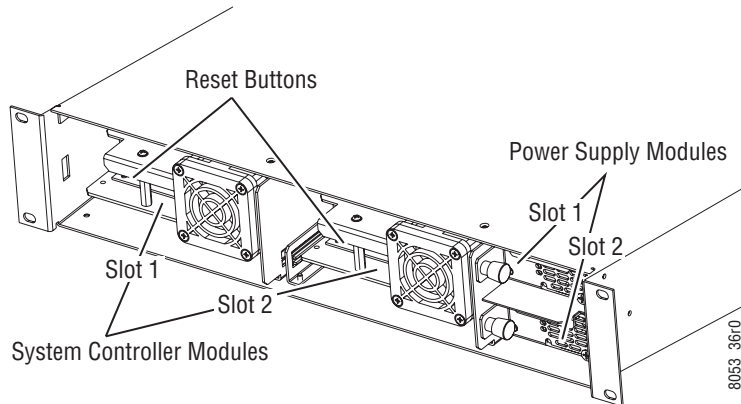


Cabling and power connectors are located on the rear of the System Controller Frame (Figure 4).

*Figure 4. System Controller Frame Rear View*
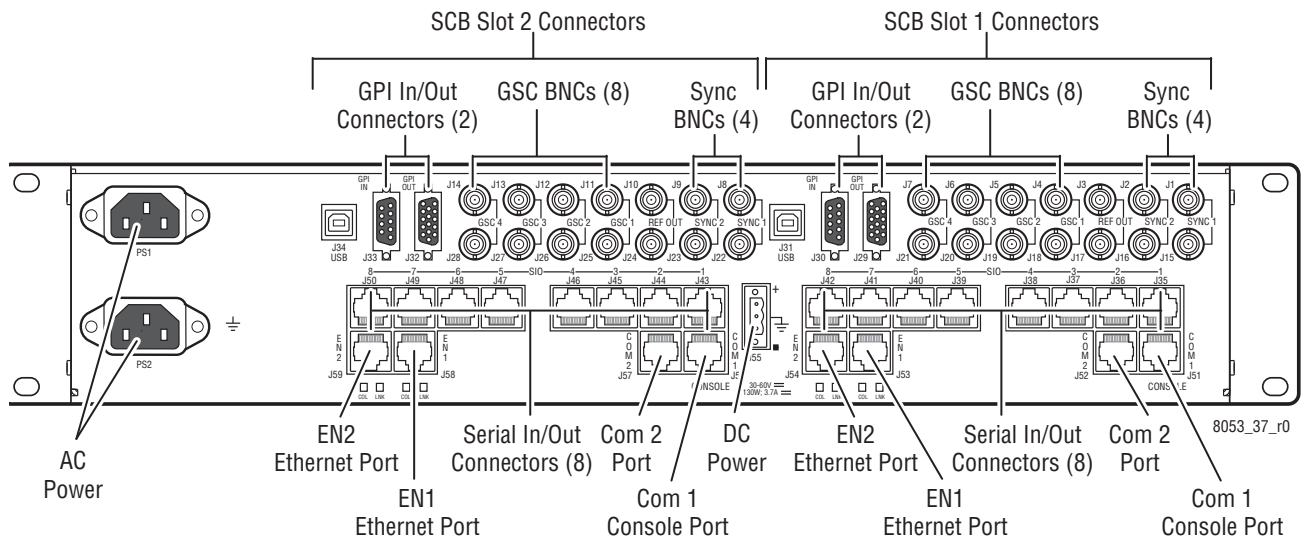


Multiple Encore System Controller Frames can be used to support large systems and to increase throughput by dividing tasks among the controllers. SCBs in the same frame can be configured to control different hardware or to operate redundantly. An SCB in one frame can even operate redundantly with an SCB in a different frame.

# Control Panels

A wide variety of hardware control panels are available that can work across the room or across the country via IP LAN/WAN connections. Many Grass Valley legacy hardware control panels can also be used with optional serial interfaces. Optional PC control panel software is also available that emulates many of these hardware panels.

The control panel operator views and selects Sources and Destinations by name and does not need to be concerned with the actual physical cabling or numbers of inputs and outputs.

Two representative Encore control panels are illustrated below.

*Figure 5. Encore Paging Multi Bus (PMB) Control Panel*



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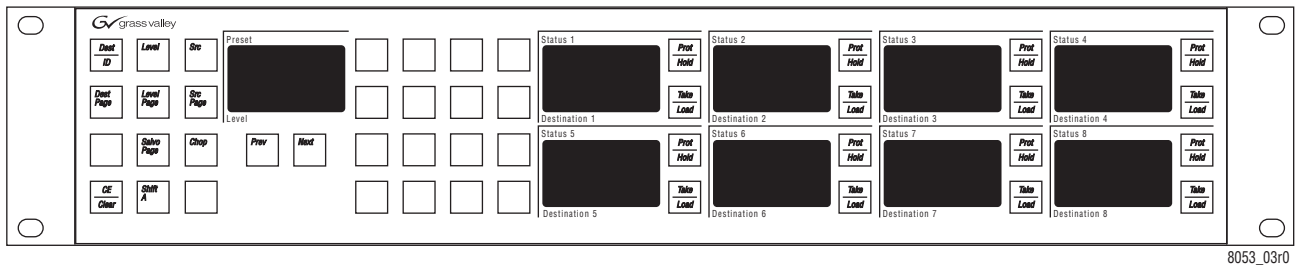
*Figure 6. Encore Button Per Source (BPS) Control Panel*



8053_04r0
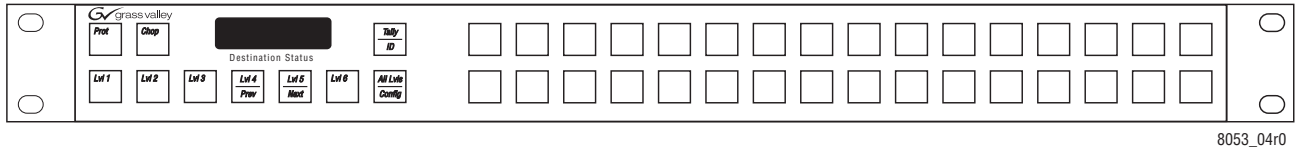
An Acappella control panel and an SMS7000 control panel, both originally developed for other routing systems but able to be configured to work with Encore, are illustrated below.

*Figure 7. Acappella 16x16 Remote Panel*



8053_05r0
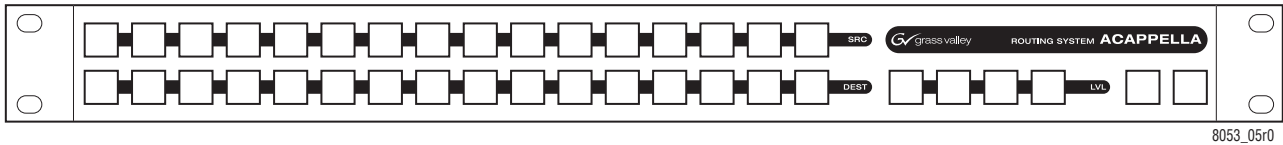
*Figure 8. SMS7000 P48 Control Panel*



8053_08r0
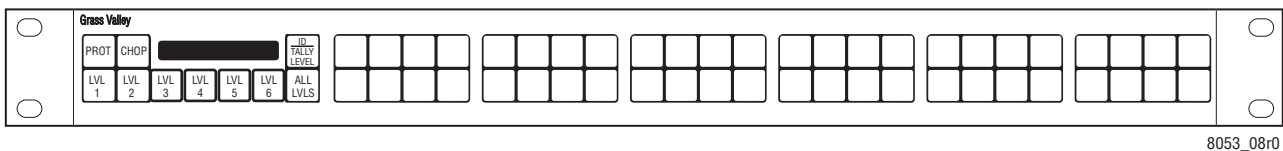
# Encore System Control Fundamentals

## Distributed Control System

The Encore system uses a distributed control networked architecture. Various Encore software components are installed on different hardware locations to perform different tasks. This design provides extraordinary system power and flexibility. Configuration files are downloaded over the network to target devices, permitting rapid configuration changes while the Encore system remains operational. User-specific system-wide access privileges can also be established to restrict system control as appropriate.

## Encore Database

Information vital to Encore system operation resides in a collection of data files, collectively called the Encore database. These files model the routing matrix hardware being controlled, name input Sources and output Destinations, determine matrix Levels, and specify the operational capabilities of the control panels. The Encore database is created when the system is commissioned and is typically maintained by facility engineering staff. The Encore database resides on the same PC as the Sharer.

## Sharer Application

The Sharer application automatically downloads configuration information to Encore system components when they are power up or reboot. The Sharer application runs on a PC, and must be running when the Encore system is configured. The Sharer does not need to be running to sustain control panel operation. However, we recommend the Sharer application run at all times, as this makes it easier to resume configuration procedures.

**CAUTION**  An Encore system can have only one Sharer application running on the network at any time. This is important to remember during software installation, or if a notebook PC with the Sharer is moved to different locations.

## Configuration PC

An Encore system is configured using a standard PC installed with the appropriate Encore software. Once configured, Encore control panels will be able to switch crosspoints on routing matrices even if the configuration PC is turned off or disconnected from the network. Typically the configuration PC also has the Encore Sharer application installed, but this application can reside on any PC on the network.

## Sharer PC

The Sharer PC is the PC on which the Sharer is installed. Typically the configuration PC and Sharer PC are the same, but separate PCs can be used.

# Routing Basics

## Terminology

**Area** - An Area is a defined group of Sources and Destinations. Takes are restricted to connecting Sources and Destinations within the same Area (unless Tie-Lines are used). Defining multiple Areas makes it possible to assign the same easily identifiable Source and Destination names (like VTR_1, VTR_2) for use by different devices at different locations in the facility.

**Breakaway** - A Take operation that switches a Source on at least one Level that is different from the Sources selected on the other Levels.

**Channel** - The communication path used to control the crosspoint group by the Router Control Engine over a selected protocol such as Serial or Ethernet paths.

**Chop** - A variation of a Take command that alternately connects each of two different Sources to a single Destination (flip-flopping) at a designated switching rate (the chop rate).

**Crosspoint** - An electronic switch that allows a signal to pass from an input to an output when the switch is closed.

**Destination** - The location to which Source signals are routed. A Destination may include one or more outputs across multiple Levels.

**Exclusion Set** - User-determined set of items excluded from control by a particular control panel. Exclusion sets can be created for Areas, Destinations, Levels, or Salvos. An exclusion set may be shared by more than one panel.

**Flag** - A parameter that can be set in a control panel template to control how a panel operates.

**Level** - A grouping of signals of a particular type, such as digital video, audio right, audio left, Red, Green, or Blue, etc. This grouping becomes an independently controllable stratum of signals within a routing system.

**Matrix** - A configuration of potentially intersecting inputs and outputs. In routing switchers, a matrix is signal switching hardware configured such that any input may be switched to any output.

**Preset** - Selecting an item (for example a Source or Destination) in preparation for an action.

**Protect** - A control function that prevents control panels or devices from changing the current Source selection for the specified Destination.

**Salvo** - A named, system-wide preset which, when executed, can change crosspoints on multiple Destinations at the same time.

**Source** - An input signal or collection of input signals generally associated with a particular device (like a VTR or DDR). A Source may contain signals from multiple Levels.

**Take** - The direct, immediate switching of a different Source to a Destination. The Take occurs during the vertical interval for a clean transition.

**Template** - A set of parameters that can be applied to a control panel's configuration. The same template can be applied to multiple panels.

**Tally** - A status acknowledgment returned to a control panel or terminal that an operation has been executed. Typically this will light up a button, but a Tally may report text (for example a Source name).

**Tie-Line** - A system tie-line is a physical connection used to give a Destination connected to the output of one matrix access to Sources connected to the input of another matrix. A signal which passes through two or more matrices; more specifically the path (consisting of one or more Tie Wires) which links a Destination of one matrix to a Source of another matrix. A local tie-line is a special type that has Sources and Destinations in the same matrix, usually sending the signal out of the matrix for external processing.

## Matrix Crosspoints and Levels Description

Each router matrix can be broken down into a number of switching matrices. A single switching matrix controls the switching (or routing) of a particular type of electrical signal (e.g. digital video, analog video, audio, data, etc.). These different signal formats are referred to as Levels. When a connection is made, a path is formed between a unique Source (logical grouping of physical inputs) and a unique Destination (logical grouping of physical outputs). The physical connection is accomplished using crosspoint circuitry. Figure 9 illustrates how a single switching matrix operates.

*Figure 9. A Single Switching Matrix*
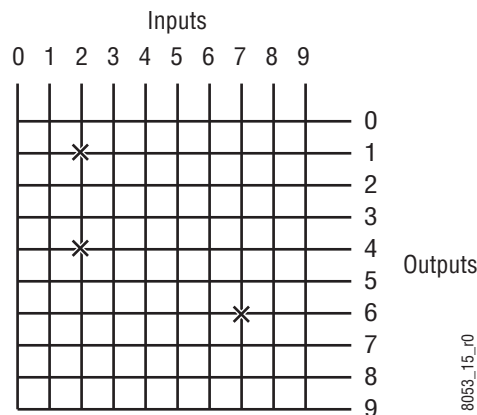
Any of the 10 inputs (numbered 0 to 9) can be routed to any of the 10 outputs (numbered 0 to 9). One input can also be routed to more than one output. All the possible routes are represented by the intersections of the horizontal and vertical lines in the illustration. The points where the lines meet (crosspoints) can be thought of as switches that allow the inputs to be connected to the outputs. In this example, three crosspoints are on (as indicated by the **X** symbols), and the following routes are made:

• Input 2 is routed to Output 1 and Output 4.

• Input 7 is routed to Output 6.

# Sources and Destinations Description

Sources consist of input signals to the router, and Destinations are output signals from the router. An individual Source or Destination may contain more than one signal. For example, a Source may consist of a video and a key signal; be separate Red, Green, and Blue video signals; or have a video signal and several associated audio signals. Each signal type is considered a Level. In general, a Source and Destination need to be configured with same number and type of Levels in order for Takes connecting them to be successful.

# Multi-Level Switching Description

## All Level Take

An all Level Take switches the same input number on all Levels, to the controlled Destination, as shown in Figure 10.

*Figure 10. Traditional All Level Take*
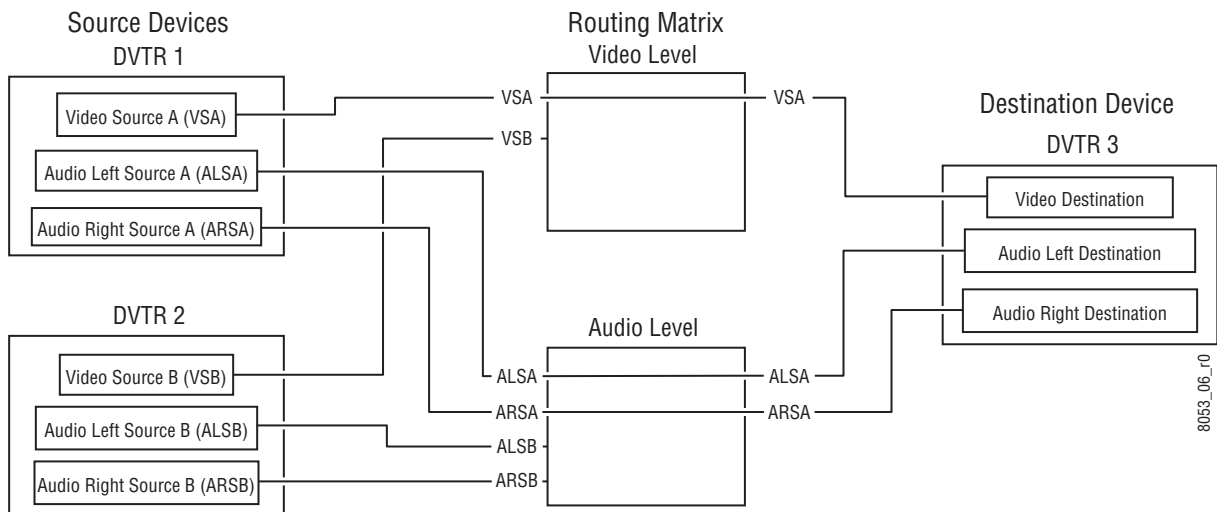
## Breakaway Take

A Breakaway Take is performed by selecting a Source different from the others (on at least one Level) to the controlled Destination. Breakaways allow a Destination to use different Sources (Figure 11).

*Figure 11.  Breakaway Take*
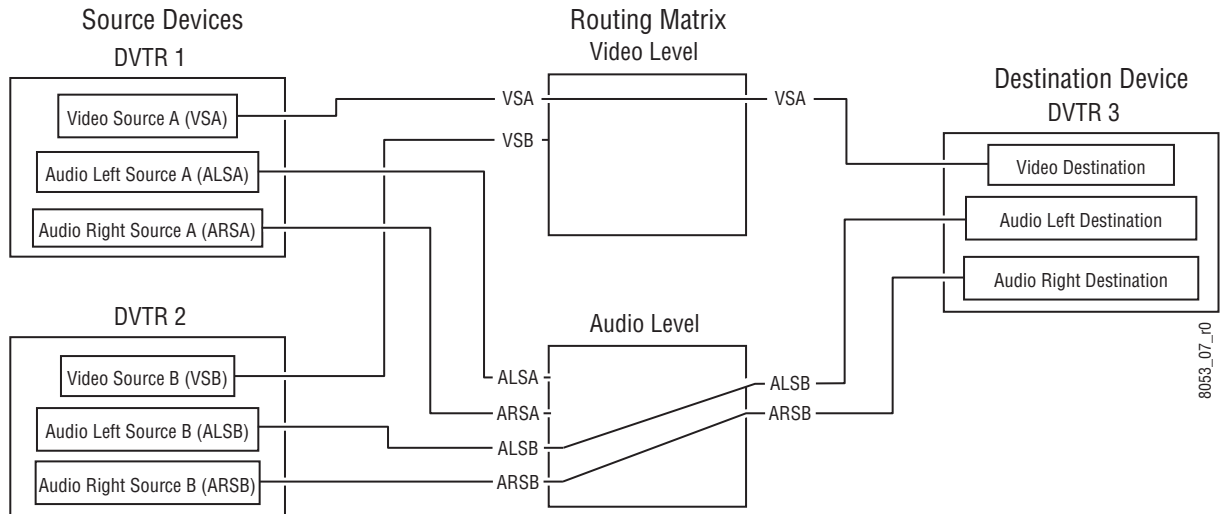


## Tie-Line Description

Tie-lines can be used to link different matrices, allowing Sources in one matrix to be routed to Destinations in another matrix. Each tie-line has a Source Name and a Destination Name that defines the signal path. A tie-line Source is actually a Destination of the first matrix, and the tie-line Destination is a Source of the second matrix. Routes that employ more than one tie-line are called multi-hop tie-lines (Figure 12).

*Figure 12.  Tie-Lines*
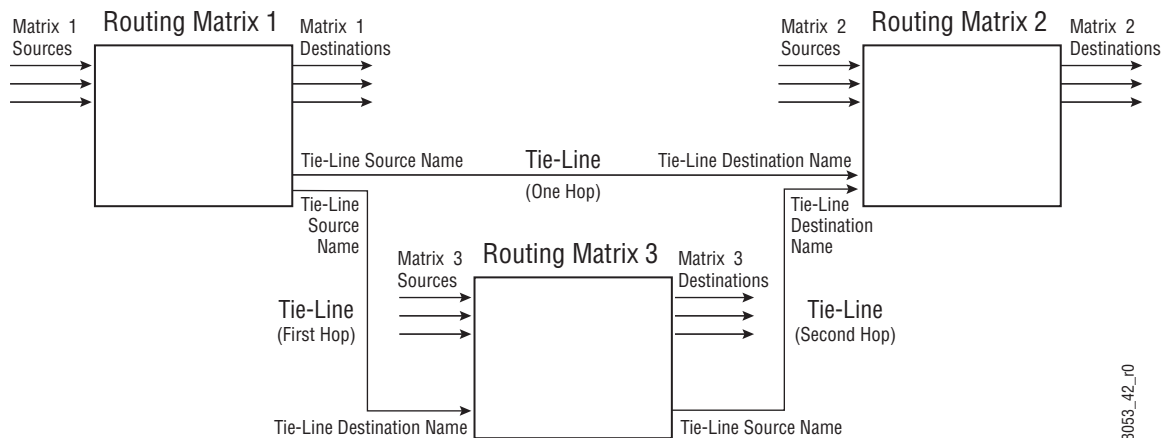
Once configured on an Encore system, actual tie-line operation is transparent to the operator. The Tie-Line Manager application automatically creates and releases tie-line paths as needed.

# *Encore Fundamentals*

## Overview

The distributed control architecture of the Encore Control system offers great flexibility and power. A basic understanding of this control architecture is beneficial for those responsible for installation and configuration.

## System Functional Layers

One way to approach the Encore Control system is to think of it as a series of layers. The Encore database is the core layer. Each layer above the database interacts only with adjacent layers, until the outermost hardware layer is reached (Figure 13).

*Figure 13.  Encore System Functional Layers*
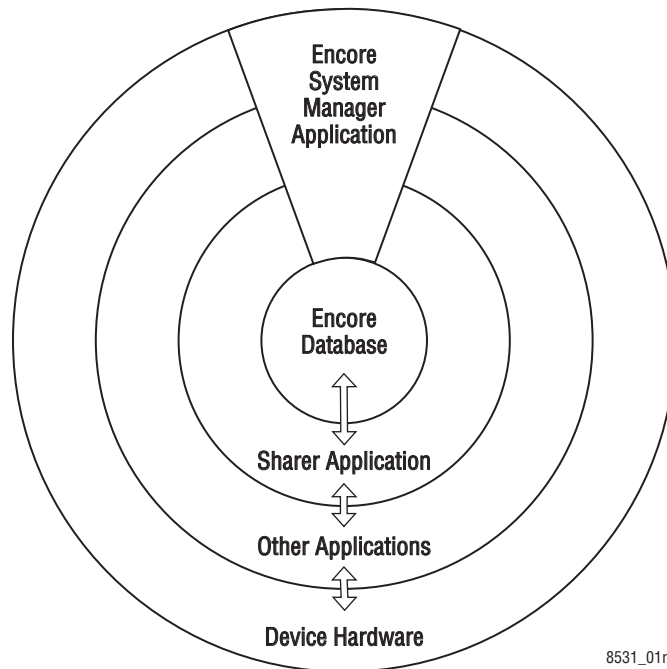
The Encore database core contains information that identifies what a particular Encore system consists of and its capabilities. The Sharer application's layer shares this information with the various distributed Encore system applications on the next higher layer. These other applications (Router, Tie-Line Manager, Panel Server, etc.) use this database information to control the hardware device components (Router Matrices, control panels, etc.) residing on the outer device hardware layer. The System Manager application spans all the layers. It is used to create the information in the database, set up how it and other applications are accessed by users, and establish the communications used to span the applications and hardware layers. The first time an Encore system is run, a special login application is used to access the System Manager.

## Client/Server Architecture

The Encore system can also be viewed as consisting of various software applications (including the applications described above) that run on various hardware processors (called Engines). Engines can be Encore System Controllers, or they may be networked PCs (called Stations, which is short for workstation). The System Manager can be used to assign which applications run on which engines. Some of these applications operate using Client/Server techniques. For example, a Server application residing on one Engine may provide information and processing resources to Client applications running on different hardware components. In this way, information that needs to be shared with multiple Encore system components can be managed effectively. An example of this structure is the Panel Server application, which runs on an Encore System Controller and provides configuration information to multiple Encore control panels, and other supported control panel models(Figure 14).

*Figure 14. Applications, Engines, Clients, and Servers*
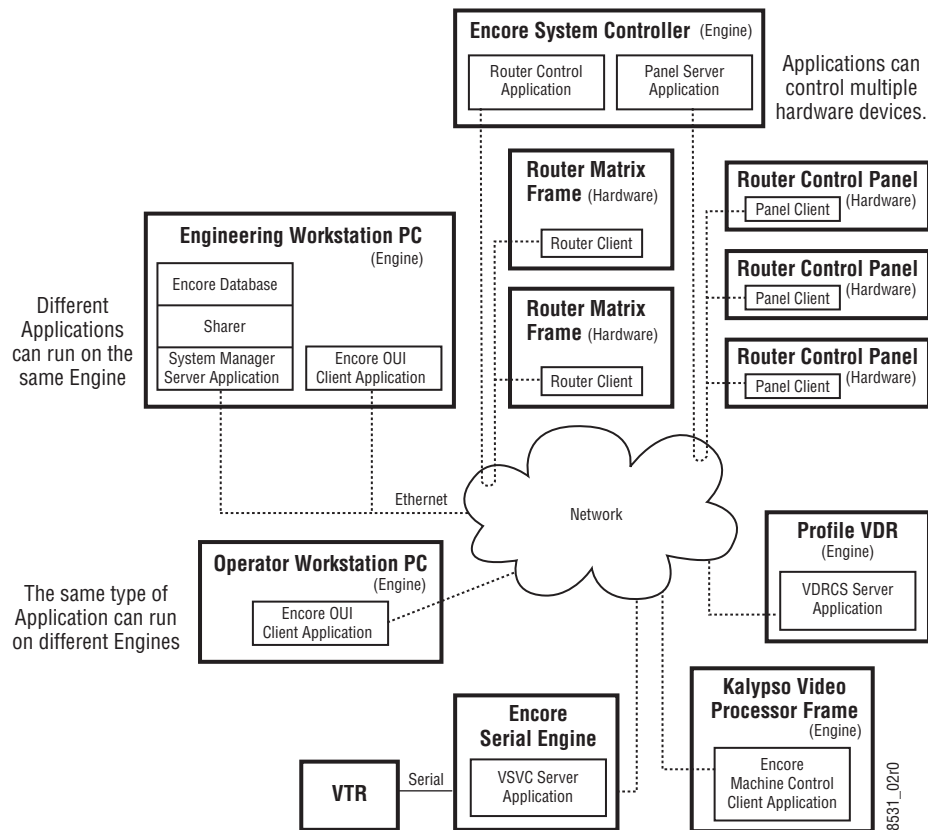


The Client/Server architecture makes an Encore system scalable, from small single purpose applications to huge facility wide installations. An Encore system can even support multi-facility operations. Additions can be made to an existing system by adding components without the need to re-engineer the rest of the system hardware. Processing workloads can be distributed among various engines to prevent bottlenecks, and redundancy can be incorporated for reliable operation.

# System Communications During Normal Operation

When an operator presses a button on a control panel, a series of messages are passed between client and server applications to accomplish the crosspoint change and to update button tallies on all the affected Panels (Figure 15). In this example the Panel Server application and the Router Control applications reside on a separate engines. If they reside on the same engine, similar communications occur.

*Figure 15. Normal Operation Steps*
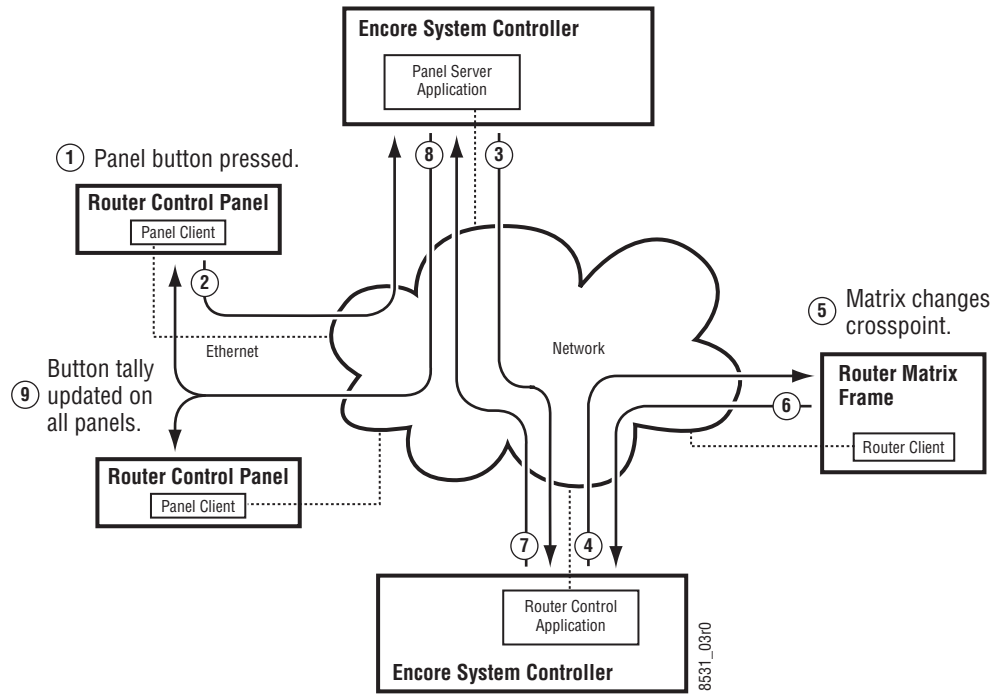


The following steps are involved:

**1.** The operator presses a Source selector button for a Destination on a control panel. The Panel button illuminates with a false tally.

**2.** The Panel sends a button press message to the Panel Server application.

**3.** The Panel Server interprets the message and sends a Source change message for that Destination to the Router Control application.

**4.** The Router Control application interprets the message and sends a crosspoint change message to the Router Matrix hardware.

**5.** The Router Matrix changes its crosspoint.

**6.** The Router Matrix sends a message reporting the new status of that crosspoint to the Router Control application.

**7.** The Router Control application sends new Source status information for that Destination to the Panel Server application.

**8.** The Panel Server application receives the new status and sends it to the control panels.

**9.** All the affected control panels then change their button tally to reflect the new status of the Destination. The false tally on the initiating control panel changes to a true tally.

It can take up to four seconds to update all the control panel tally statuses on a large Encore system. If the requested crosspoint change fails to occur, the false tally on the initiating control panel reverts to the actual Source selection for that Destination after a time-out.

## Distributed Configuration and Status Data

The Encore system's varying hardware components and flexible capabilities means various types of configuration and status information are required. This information specifies what the system does and how its components work together.

The Encore system employs a distributed database mechanism. A comprehensive database exists that contains all the Encore system configuration information. Portions of this principle database are then copied to various Encore system components where it is needed. This allows the system to continue normal operation even if the device storing the comprehensive database goes off-line or is otherwise unavailable. This also allows an operating Encore system to remain on-line while it is being re-configured. This is especially powerful with control panels, which can be remotely reconfigured instantly to acquire different operating functions. Control panels also automatically receive a default configuration (from previously defined templates) as soon as they are added to the Encore network.

With a distributed database, the various copies of the data must be synchronized. Various methods are used to accomplish this. In general, when an Encore component is operating in Sharer mode, that means it is in sync with the comprehensive database managed by the Sharer. If in Local mode, the local database information is not being updated by the Sharer and so may not be synchronized. Commands are available (Modify, Load, Save, etc.) to force the synchronization of the database information.

Another important aspect of the Encore system is reporting accurate system status information. The current status of the system (for example, which Sources are routed to which Destinations), must be available to many Encore components so they can display the correct Source and Destination names and tallies. Memory maps are used to for this purpose. Memory map information cascades up from the Matrices for display on the control panels.

Figure 16 illustrates the concept of a distributed database, templates, and memory maps.

*Figure 16.  Encore Distributed Database Information*

**Engineering Workstation PC**

**Encore System** database

Sources | Destinations | Levels | Defined Areas | Defined Engines | Defined Workstations | Defined Applications | User Logons | Permissions | Panel Templates

Sharer

System Manager

Network

Ethernet

Sharer manages distribution of database information to Encore system components

System Manager configures Users, Engines, Applications, Permissions, etc.

**Encore System Controller**

**Panel Server** database

Sources | Destinations | Levels | Templates | Global Memory Map of Logical Source and Destination Statuses

**Router Controller** database

Sources | Destinations | Levels | Connections | Global Memory Map of Physical Crosspoint Statuses in controlled Router Matrices

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**Panel Server Application Commands:**

Load Template: Loads selected template for editing.

Save Template: Saves the edited template.

Copy Template to Panel: Copies the currently selected template to a selected Control Panel

Copy Panel to Template: Copies the settings of the curently selected Control Panel to a selected Template.

Control Panel

Template | Button Status, Source, Destination, and Level Names

Control Panel

Template | Button Status, Source, Destination, and Level Names

Control Panel

Template | Button Status, Source, Destination, and Level Names

**Matrix** database (one Matrix)

Sources | Destinations | Local Memory Map of Physical Crosspoint Statuses in this Matrix

**Matrix** database (one Matrix)

Sources | Destinations | Local Memory Map of Physical Crosspoint Statuses in this Matrix

**Router Controller Application Commands:**

Modify: Saves Router database to the Encore System database (via the Sharer)

Reload Database: Loads Encore System database information to Router database

Re-Sync Router: Polls matrices and synchronizes router memory map with actual crosspoint statuses.

Re-Sync Matrix: Sends router memory map to Matrices, changing crosspoint settings if necessary to match.

# Automatic Detection of Database Match

Encore 1.7.3 and newer software automatically detects whether the Sharer and SCB flash memory have correctly matching databases, and automatically go to Sharer mode if they are identical.

If the Sharer shuts down on the network, each Router Controller and Control Panel Server goes to **Local** filing mode. Now, whenever the Router Controller or Control Panel Server detects the Sharer, they check the copy of the database on the SCB Flash against the Sharer database. If the databases match, these applications automatically go back to **Sharer** filing mode.

This check is also performed when the Router Controller or Control Panel Server starts up. If the databases match, the Sharer database is not downloaded, which significantly reduces the time delay to full operation.

# Redundancy

To ensure reliable Encore system operation, various forms of redundancy are available. For example, System Controller frames can be equipped with redundant power supplies. The power supply with the greatest load is automatically used by the frame. Providing power from separate circuits to each power supply helps ensure power to the frame will not be interrupted.

System Controller frame cans also be equipped with two System Controller Boards (SCBs). Applications running on different SCBs can be configured in Master/Slave pairs, such that if one SCB fails the applications on the other SCB automatically take control without any interruption of system operation. In Encore 1.7.3 and newer software, redundancy mode information is stored in the memory of the frame and validated. This ties redundancy mode settings to the frame slot, not the SCB. Applications can be Master/Slave paired on SCBs in the same frame, or SCBs in different frames can be used to provide even more robust redundancy. When SCB redundancy is being used, the databases on both SCBs must remain synchronized for proper operation should a change-over occur (Figure 17).

*Figure 17.  Encore Redundancy*
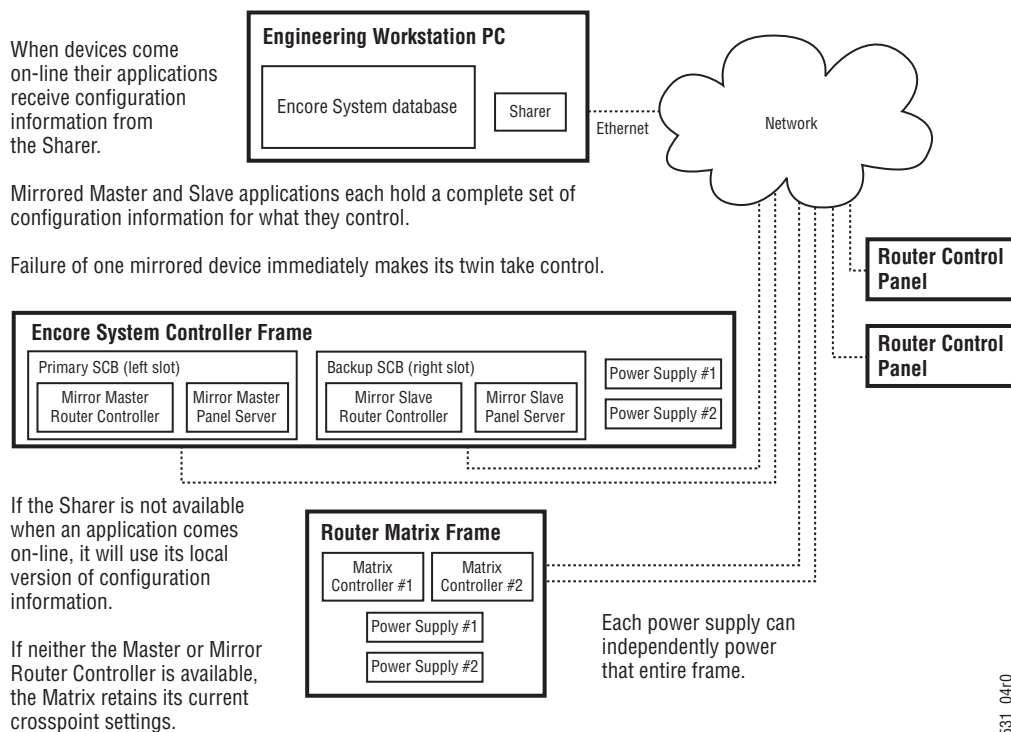


# Database Backups

The Encore system's comprehensive database is an extremely important set of information, since it supplies data to all the other system components. This database can be backed up by copying the OMN directory and its col-

lection of subdirectories to a safe location. Doing this whenever the data base changes is a recommended practice, since file corruption is a possibility with any computer hardware. Should the Encore database file set become damaged, the backup database can be quickly reloaded to rapidly restore full system configuration capabilities. Because of the distributed database architecture, even if the comprehensive database file becomes unusable the Encore system remains operational. Crosspoints will remain at their current settings, and Source to Destination Takes continue to be available from all operating hardware control panels or other control points (Automation, Router Control, Soft Panels, etc.).

# Encore Software Applications

An Encore system consist of a suite of software applications, all of which are accessed through the Encore user interface.

## Local Applications

Local applications accessed from the Encore User Interface include:

- **Start** — User log-on button.

- **Pager** — Electronic messages between users.

- **Filer** — Database access window.

- **Local Router Panel** — Configurable full function software control panel.

- **Local Machine Control Panel** — Software machine control panel, requires external engine.

## Remote Applications

Remote applications are the backbone of the Encore system. Remote applications are accessed by users once they log into the Encore system. Each application authorized for that user appears as an additional button in the Encore User Interface.

### Control Panel Server Application

This application services up to 128 control panels. Through the Encore User Interface, the user sets the personality of the control panels. The Control Panel Server application also services all RCL clients, such as an M-2100 Master Control system, Kalypso Video Production Center, or a third-party automation system.

### Router Control Application

This application receives switching requests from the Panel Server application and sends them to the Matrices for execution. Through the Encore User Interface, the user establishes crosspoint functionality, such as Levels, Sources, Destinations and protocol drivers.

### Tie-Line Manager Application

This application controls the tie-lines in the system. Tie-lines provide transparent routing of signals between local matrix Levels and remote matrices. Through the Encore User Interface, the user creates and manages tie-lines.

### System Manager Application

The system administrator uses this application to set the permissions and system access for all users. It is also used to configure the hardware supporting the Encore Control System software.

# Encore OUI Description

## Common Display Features

### Encore Desktop

When you logon to the system, the Encore Desktop appears (Figure 18).

*Figure 18.  The Encore Desktop*

**This is the help bar**

**Help Bar** — As you move the mouse pointer around the screen, the Help Bar displays information on the areas it passes over.

**11:59:58**
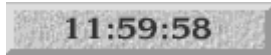
**Clock** — Click the Clock in the top right corner of the Desktop to show or hide the Menu Bar. The Menu Bar appears to the right on the Desktop.

**CP Server**

**Title Box** — The Title Box displays the name of the currently active application. Click the Title Box to view the status information your workstation.

CP Server      MACH. CNTRL | ROUTER | FILER | PAGER | ON-LINE Jay

**Task Bar** — When an application is open, its icon shows on the Task Bar. To load an application, click its icon. You can switch between applications by clicking different icons.

Main Menu

Route
Names
Config.
Options

**Menu Bar** — The Menu Bar has an upper and a lower section. The lowest button in the upper section acts as a heading for the lower section. The buttons on the Menu Bar may be different, depending on the application you're viewing/using at the moment.

There may be two types of buttons on the Menu Bar:

• Light-blue buttons represent categories; click one to display a further level of options.

• Dark-blue buttons control a specific action.
  The Menu Bar contents change depending on the category you select from the Main Menu.

## Buttons

**Indicator Button** — An indicator button has an indicator which changes color when you click the button. The indicator may be a small rectangle or the whole button.

**Greyed-out Button** — You cannot select greyed-out buttons.
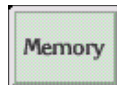
**Active Button** — You can select a button that is not greyed out.

## Icons and Windows

**Re-Size Icon** — Use the Re-size icon to alter the size of a window. The icon is in the bottom right corner of the window.

To re-size a window, click the icon and drag the mouse while holding the mouse button down.

To move a window without affecting the size, click-hold on the window edge and drag the mouse.

**Enter/Return Icon** — Click this icon to confirm information you enter. You can also use the **Enter/Return** key on your keyboard for this purpose.

**Eject Icon** — Click this icon to close a window. This icon is located in the top right corner of windows. You can also use your keyboard **Esc** key for the same purpose.

**Alphanumeric Keypad** — You can use the Alphanumeric Keypad to enter text and numbers. Click the keys on the Keypad or use the keyboard of your workstation.
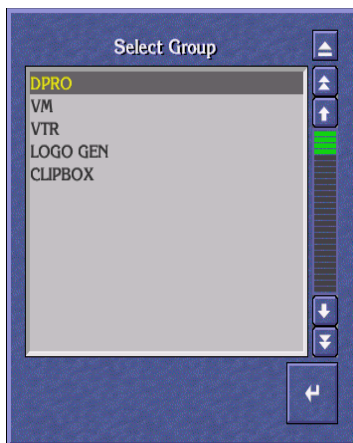


**List Window** — A List window contains a list of items which you can search, view or select.

Click the Single Arrow icons ( 🔼 🔽 ) to scroll up and down the list by one line at a time

Click the Double Arrow icons ( ⏫ ⏬ ) to scroll up and down the list by one page at a time

Click and move the green slider bar ( ▤ ) to scroll through a list window.

If you press a character on your workstation keyboard, the list scrolls until the first item that starts with that character appears at the top. For example, press M to move to the first item beginning with the letter M.

You can also use the arrow keys and the **Page Up/ Page Down** keys on the keyboard to search.
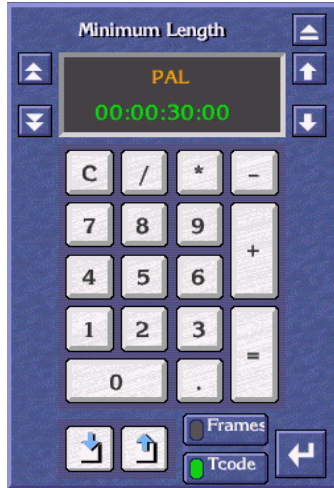
**Numeric Keypad** — Use the Numeric Keypad to enter time codes.

To enter time codes in frames, click the **Frames** button.

To enter time codes in hours, minutes, seconds and frames, click the **Tcode** button.

Click the double arrow icons ( ▲ ▼ ) to the left of the window to increase or decrease the time code in one-second steps.

Click the single arrow icons ( ↑ ↓ ) to the right of the window to increase or decrease the time code by one frame at a time.

Clicking the decimal point ( ▫ ) causes a colon (:) to appear in the timecode display so that:

**15** enters as **00:00:00:15** (15 frames)

**15**. enters as **00:00:15:00** (15 seconds)

**15**. enters as **00:15:00:00** (15 minutes)

To enter a Keypad number or function, click a key on the Numeric Keypad graphic, or use your keyboard.

Use the ▫ ▫ ▫ ▫ keys to perform simple calculations.

**Copy To Clip Pad** — Use the **Copy To Clip Pad** icon to copy text or numbers to the **Clip Pad** list window.

**Retrieve From Clip Pad** — Use the **Retrieve From Clip Pad** icon to select the **Clip Pad** so that you can retrieve information.
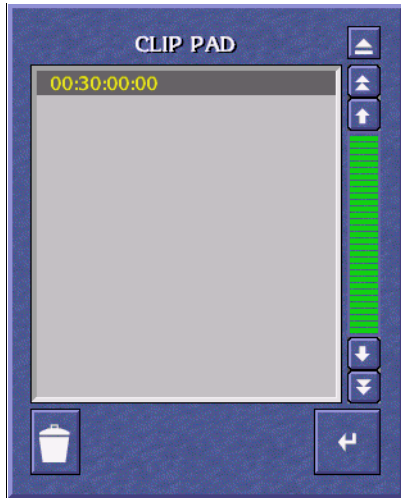
**Clip Pad** — Use the **Clip Pad** to store useful information. To retrieve a Clip Pad item, highlight it in the list window, then click the **Enter/Return** icon.

**Dustbin** icon — To remove an entry from the Clip Pad, highlight the item and click the **Dustbin** icon.

# Messages

## Message Window (with options)

A Message Window may appear when you are using an Encore application. The message may ask you to confirm an action by clicking one of the buttons in the Window.

To continue, click a button; or, using your keyboard, press the first letter of the button name (for example, press the **Y** key instead of clicking the **Yes** button).

*Figure 19. Message Window With Options*

### Message Window (without options)

If there are no options, click the window or press the **Enter/Return** key on your keyboard.

*Figure 20. Message Window Without Options*
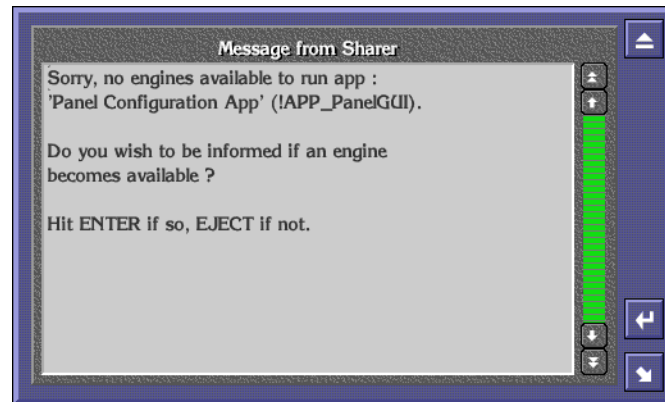


### Selecting Options

You can usually select options in two ways:

- Double click the required option, or

- Click once to highlight the option, and then press the **Enter/Return** key on your keyboard.

# Basic Procedures

This section describes how to:

- Logon to the OUI,

- Load an application,

- Request an application from another user, and

- Log off the OUI.

### Logging onto the OUI

When you launch the OUI application on your workstation, the system displays the OUI Logon Screen. From this screen you can logon to your OUI workstation and load the applications you want to use.

1.  Click the **Start** button on the right of the task bar. The Logging-On User Identity Box appears.

**2.** Type your **User Identity** (given to you by the System Administrator) into the User ID Window; then press the **Enter/Return** key or click the **Enter/Return** icon.

You can use either your workstation keyboard or the on-screen Alphanumeric Keypad. Type either upper or lower case characters — the ID detector is not case-sensitive.

**3.** Type your password (given to you by the System Administrator); then press the **Enter/Return** key or click the **Enter/Return** icon.

**Note**   Password entry is an optional feature, determined by the system configuration; a password-entry window appears only if the option is chosen. The password is case-sensitive — you must type it exactly as it was given to you by the System Administrator.

A Welcome to Encore message is displayed, in addition to your user information and any messages entered via the System Manager application or the System Administrator. Your User Name (or the first part of it) appears on the **Start** button. Icons that enable you to access local OUI applications are displayed on the Task Bar.

*Figure 21.  Typical Log-On Welcome Screen*
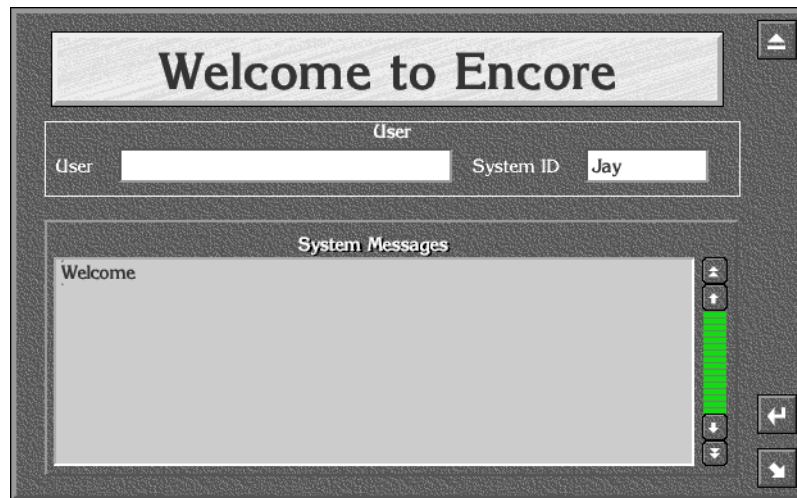


**4.** Press the **Enter/Return** key on the keyboard or click the **Enter/Return** icon. A list of remotely configured (i.e., server-based) Encore applications is displayed in the center of the screen.

*Figure 22. Typical Select Application List*
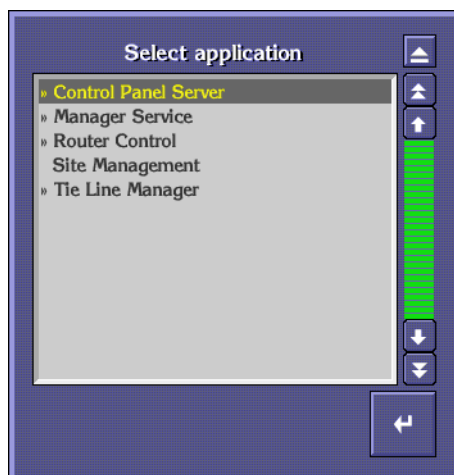


**Note**   Before you can use a remote application, the necessary hardware and software must be suitably configured and accessible (subject to routing arrangements and password) from your OUI workstation. Refer to your System Administrator if you are having system-configuration problems.

# Loading an Application

After you logon to the OUI workstation, you can load any available and suitably configured Encore application programs.

## Loading a Local Application

The four OUI local applications are available at all times. To load an application, click its icon in the Task Bar. The icons are shown below with a brief description of the application.



**Local Machine Control Panel** — Provides local control of devices available on the Encore Network and information on the status of selected devices.



**Local Router Panel** — Provides routing facilities between available Source and Destination devices.
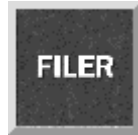
**Filer-Fax** — Provides management facility for all clips on the Encore system as it accesses the Sharer. It is used to filter and select clips to load via the LMCP.

**OmniPager** — This application provides a messaging service between all workstations on the Encore network.

**Note**    You can load more than one local application. If you exit an application when more than one is loaded, the screen reverts to the application previously displayed. You can toggle between local applications by clicking the icons in the Task Bar.

## Loading a Remote Application

1.  Click a blank button on the taskbar. A list of remote applications is displayed (See ); those that are available are marked with a double arrow (>>).

2.  If the application you require is available, double-click its name in the list (or click once and then click the **Enter/Return** icon).

**Note**    If the application you require is not available, you must request it from another user before you can load it (see *Requesting an Application from Another User* )

Once the remote application is loaded, its main screen is displayed and its icon appears in the Task Bar. Refer to the application's Reference Guide or Tutorial for information on how to use it.

**Note**    You can toggle between remote applications by clicking the icons in the Task Bar.

## Requesting an Application from Another User

1.  From the list of remote applications, select the one you require by double clicking its name. (You know the application is in use since it is not marked with a double chevron.) The Application Sharer Message Screen is then displayed.

2.  Click the **Enter/Return** icon to send a message to the current user, requesting use of the application. The Message Screen disappears.

**3.** The other user acknowledges the Application Request Message by clicking the **Enter/Return** icon. When the user exits the application, the system sends you a message indicating that the application is available.

**4.** You can load the application as described in *Loading a Remote Application* on page 44.

*Figure 23. Typical Application Message Sharer Screen*
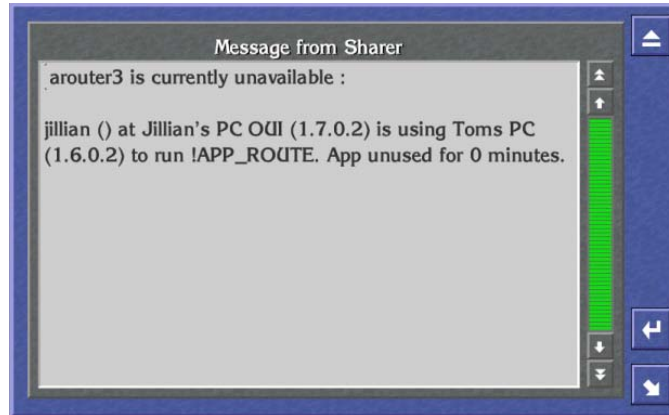


**Note** If you do not need the application urgently, click the **Eject** icon - no Application Request Message is sent.

## Dropping an Application

**1.** Click the Title Box to display the OUI Station Status Window. The OUI shows the application currently in use in the Application Area.

**2.** Click the **Drop Application** button. If more than one application is open, then the OUI shows the last application used. Continue to click the **Drop Application** button until you close the applications you want to.

**3.** Close the window by clicking the **Eject** button.

*Figure 24. Application Section of the OUI Station Status Dialog Box*
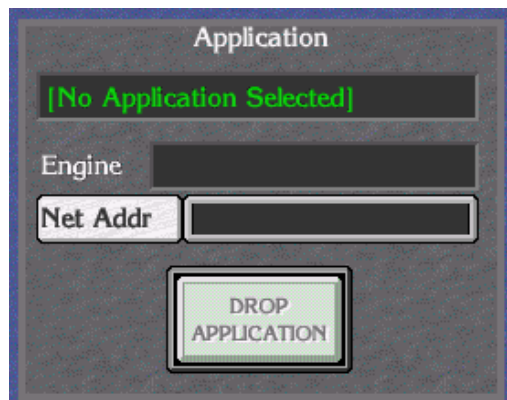
# OUI Station Status Window

To display the OUI Station Status Window from the Encore Desktop, click the Title Box.

*Figure 25.  OUI Station Status Window*
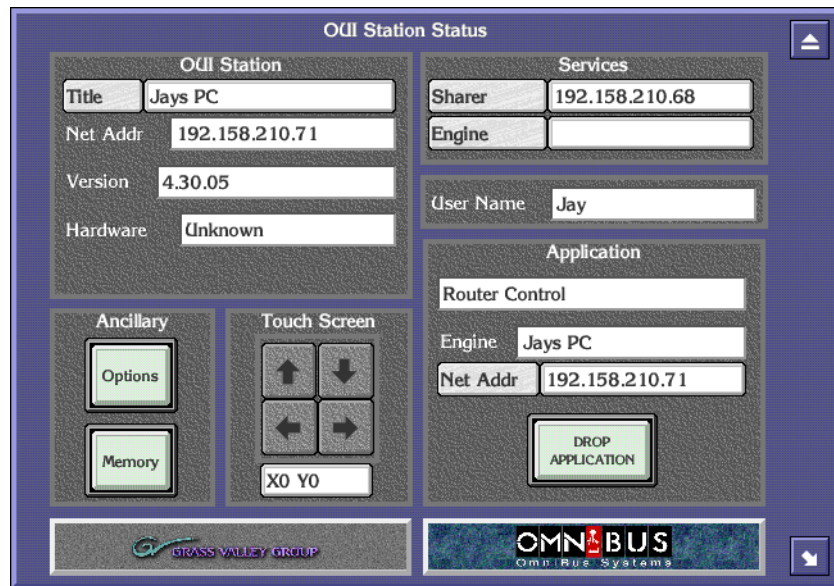


The OUI Station Status Window has five areas:

**OUI Station** — The OUI displays the name of the workstation that you are logged onto, its IP address and the version number of the OUI that is running.

**Ancillary** — This has two buttons, **Memory** and **Options**. Click the **Memory** button to view memory-usage details. For more information about the **Options** button, see *Ancillary Options*.

**Touch Screen** — This enables you to adjust the settings of an attached touch screen.

**Services —** Click the buttons in this area to confirm that the Sharer and a specific engine are on-line.

**Application —** In this area, the OUI displays details of the remote application currently highlighted on the Task Bar.

# Ancillary Options

*Figure 26. Ancillary Options*



Click the appropriate button:

**Prompts to help bar** — Display error prompts and messages on the Help Bar.

**Swipe Menu Bar** — Switch off the Menu Bar if it overlaps other items on the screen. Otherwise, the OUI permanently displays the Menu Bar. With the option chosen, you can cause the Menu Bar to appear and disappear by clicking the Clock in the top right corner of the Desktop.

**Number dialogues show days** — Show time codes, if they are longer than 24 hours, in the format days:hours:minutes:seconds:frames. For example, 1:16:32:19:10. Otherwise, the system shows time codes as hours:minutes:seconds:frames. For example, 40:32:19:10.

**Enable direct text entry —** Allows you to type entries directly into fields in the OUI. When this feature is disabled, clicking those same fields opens a separate dialog for data entry.

**Layout1, Layout2** — Choose different keyboard layouts. The OUI displays a list of keyboard options.

**ARC Serial, Serial Port 1, Serial Port 2** — Set up Encore hardware devices on the serial ports of your workstation. The OUI displays a list of hardware devices.

**Shortcut List** — Record one or more actions to replay later. When you click this button, the OUI displays the Shortcut Key Editor. See *Shortcut Key Editor* and *How to Create a Shortcut or Macro* on page 49 for more details.

## Shortcut Key Editor

Use the Shortcut Key Editor to create and maintain shortcuts and macros.

- A shortcut is a single action you record to replay later.

- A macro is a sequence of actions you record to replay later.

You can replay shortcuts and macros as many times as you want.

To display the Editor from the Encore Desktop, follow these steps:

1. Click the Title Box. The OUI Station Status Window appears.

2. Click the **Options** button.

3. Click the **Shortcut List** button. The OUI displays the Shortcut Key Editor.

*Figure 27. Shortcut Key Editor*



The list on the left shows the shortcuts and macros currently assigned to function keys.

**Shortcut Key Editor Buttons**

Use the Shortcut Key Editor buttons to perform tasks:

**Shortcut List**

**Load** — Load a shortcut list. The system displays shortcut lists from which you can select the one you want to load. Note: The OUI saves this setting when you switch off your workstation.

**Save As** — Save the current shortcut list with a new name.

**Clear** — Delete the current list.

**Modify** — Save changes to the list.

**Shortcut**

**Current Shortcut** — Assign a function key to a shortcut or macro.

**New** — Create a new shortcut or macro.

**Delete** — Delete the highlighted entry in the shortcut list.

**Action**

**Action** — Change the name of the shortcut or macro. Warning: If you change the name of a macro, make sure you change the name to that of an existing macro.

**New** — Record a new shortcut or macro.

**Macro** — Load a previously saved macro. The OUI displays the currently loaded macros in the Shortcut list in the left of the window.

**Details** — Displays a list of the actions in a shortcut or macro.

**How to Create a Shortcut or Macro**

1.  In the Shortcut Area, click the **New** button. A blank entry with the name "None" appears in the Shortcut list on the left.

2.  Click the **Current Shortcut** button. Enter the function key you want to assign to the shortcut or macro (for example, F1, F2 etc.). Alternatively, press the appropriate function key on your keyboard.

3.  In the Action Area, click the **New** button. The system displays the Action Box which has four buttons — from left to right, **Record**, **Stop**, **Play** and **Enter**.

4.  Click the **Record** button to start recording.

5.  Perform the action (or actions) you want to record.

6.  When you finish, press the **Stop** button.

    **Note**    If you want to replay your shortcut or macro to check it, press the **Play** button.

7.  When you are satisfied with your shortcut or macro, press the **Enter/ Return** button.

8.  Enter a description for your shortcut or macro.

    **Note**    If you performed more than one action, the system displays the Save Macro Filer-Fax to allow you to save your sequence of actions as a macro. Click the **Name** button and enter a name for your macro. Press the **Enter/Return** key; then press the **Save** button.

9.  In the Shortcut List Area, click the **Modify** button to save the shortcut or macro to the currently loaded list. To save the shortcut to a new list, click the **Save As** button.

## Logging off the OUI

1.  Click the **Start** button on the right of the Task Bar.

2.  The system displays a warning message.

3.  Do one of the following:

4.  Click **YES** (or press **Y** on your keyboard) to log off.

5.  Click **NO** (or press **N** on your keyboard) if you do not want to log off.

6.  Click **HELP** (or press **H** on your keyboard) if you require help.

7.  If you select **YES** the system exits all the applications you have been using, leaving remote applications free for other Users. The workstation returns to the OUI Logon Screen.

*Figure 28. Log Off Warning Message*



**CAUTION** Before you turn off your workstation you must close down each remote Encore application by selecting either the **Disconnect** or **Drop Application** option to allow other Users access to those applications.

## Changing the Size of Your Encore OUI

After you've installed Encore and its components and worked with the Encore OUI for awhile, you may want to change the size of the OUI window. For example, you may want change to or from using a touch screen and therefore change the size of the buttons. To change the window size on a Windows XP PC, follow these steps.

**1.** Right-click **My Computer** on your workstation desktop and choose **Properties**, **Advanced**, **Environment Variables**. A window will appear as shown in Figure 29.

*Figure 29. Entering User Variables and Values*
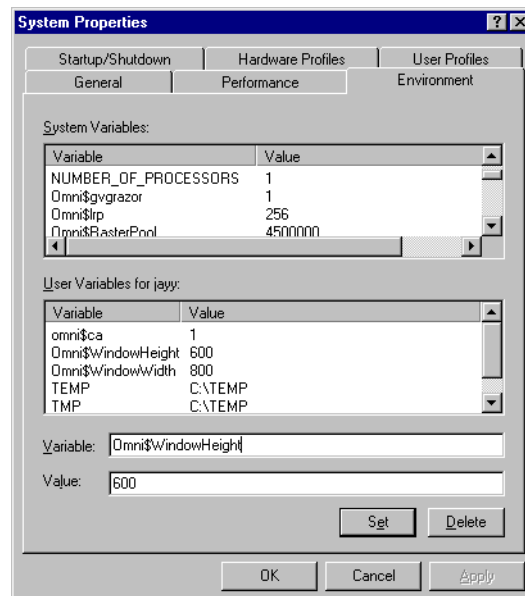
2. Select the Omni$WindowHeight and Omni$WindowWidth variables and change them to an appropriate Windows value as noted in the table below, being careful to maintain both values in *the same column*.

*Table 1.*

| Variable | 640x480 Values | 800x600 Values | 1024x768 Values |
|---|---|---|---|
| Omni$WindowHeight | 480 | 600 | 768 |
| Omni$WindowWidth | 640 | 800 | 1024 |

3. Click the **Set** button after each entry to move it to the User Variables scrolling list area.

# *Initial Encore System Setup*

## Overview

This section explains how to get a basic Encore system set up for the first time. After your Encore system is functioning at this basic level, you will be able to modify its configuration to meet the specific requirements of your facility, adding the necessary additional components.

The example Encore system described here consists of:

- one Encore System Controller frame with redundant SCBs,
- a small number of Encore control panels,
- a user supplied PC used for configuration, and
- two user supplied Ethernet switches and associated Cat 5 cabling.

The initial system setup steps include:

1. Create an isolated Encore network with default IP addresses,

2. Install Encore software on your Sharer PC, which you will also use to configure your system,

3. During Encore software installation you can load the Encore default database (recommended for first time installations),

**CAUTION** If you are working on an existing Encore system, do NOT install the default database. Information on manual configuration is presented at the end of this section.

4. Resolve any duplicate IP addresses, and

5. Test Encore system communication and control panel tally, using the dummy matrix included with the default database.

After Encore system communication has been tested, you can then modify its configuration to make it fully operational. This will include changing the IP addresses (if necessary), adding any additional System Controller frames, adding and configuring the Matrix frame(s), and adding and configuring control panels. These added steps are covered later in this manual.

## PC Requirements

A customer supplied PC is used for software installation and initial system configuration. This PC must meet the following minimum requirements:

- 2 Ghz CPU
- 512MB RAM
- 40GB hard drive
- 250MB free hard disk space
- Monitor with 1024x768 resolution
- 100BaseT Ethernet Network Interface Card
- Windows XP Professional (Service Pack 2)
- Logged in with Administrator-level privileges for the local machine
- Internet Explorer version 6.0 or later

# Initial Setup Using Default Database

## What The Encore Default Database Does

The default database contains settings that allows a basic Encore system with default IPs to be quickly and easily tested for successful system communications. Installing the default database will:

- Register a Sharer PC with an Encore default IP address as a workstation,
- Registers a user (SYS) to permit Encore system configuration,
- Registers both a primary and a backup Encore System Controller (SCB) as Engines,
- Specifies the SCBs will each run the Router Control and Panel Server applications in Master/Mirror mode, and
- Specifies the use of a Dummy Matrix that simulates router hardware.

If the Encore default database is not installed, the above steps will need to be accomplished manually.

# Create Default Encore Network

## Default IP Addresses

### Sharer PC

Encore system components ship with default IP addresses. To use these default settings, the PC you use to configure your Encore system will also run the Sharer and need to have the following settings:

*Table 2.  Sharer PC IP Addresses*

| Encore Sharer PC | |
|---|---|
| Ethernet IP Address | 192.168.0.102 |
| Ethernet Subnet Mask | 255.255.255.0 |
| Ethernet Gateway | 192.168.0.100[a] |

[a] PC Ethernet Gateway must match Encore Master Controller Ethernet1 IP Address

Your Sharer PC will also need the following settings if you are using it on an isolated network:

- Ensure MS Firewall turned off.

- Internet Explorer is configured correctly, and

- Internet Explorer proxy server must be disabled.

### Encore System Controllers

An Encore System Controller ships with the following default IP addresses, and these addresses are included in the Encore default database:

*Table 3.  Encore System Controller (SCB) Default IP Addresses*

| | Encore Controller 1 (master) | Encore Controller 2 (mirror) |
|---|---|---|
| System Name | SCB-1A | SCB-1B |
| Ethernet1 IP Address | 192.168.0.100 | 192.168.0.101 |
| Ethernet1 Subnet Mask | 255.255.255.0 | 255.255.255.0 |
| Ethernet1 Gateway | N/A | N/A |
| Ethernet2 IP Address | 192.168.1.1[a] | 192.168.1.2[a] |
| Ethernet2 Subnet Mask | 255.255.255.0 | 255.255.255.0 |
| Ethernet2 Gateway | 192.168.1.1[a] | 192.168.1.2[a] |

[a] Ethernet2 IP Address must match Ethernet2 Gateway address for that Encore Controller.

### Encore Control Panels

Encore control panels supplied in the same order will typically be set at the factory with ascending IP addresses. Duplicate panel IP addresses are possible, however, especially if panels are shipped separately:

*Table 4. Encore Control Panel Default IP Addresses*

| First Encore Control Panel | | Additional Encore Control Panels |
|---|---|---|
| Ethernet IP Address | 192.168.1.61 | increment by 1 (e.g. 192.168.1.62) |
| Ethernet Subnet Mask | 255.255.255.0 | same |
| Ethernet Gateway | 192.168.1.1[a] | same |

[a] Control Panel Ethernet Gateway must match Encore Master Controller Ethernet2 IP Address

## Network Cabling

An Encore system actually uses two networks. One network is used for router matrices and control panels. The other is used for system wide control, system configuration, control of additional devices, and facility integration. In the example shown in Figure 30 two Ethernet switches are used, but variations are possible, including the use of a single managed switch. Ethernet hubs are not supported. Refer to the separate *Encore Installation and Service Manual* for more information.

*Figure 30. Encore Network Cabling*
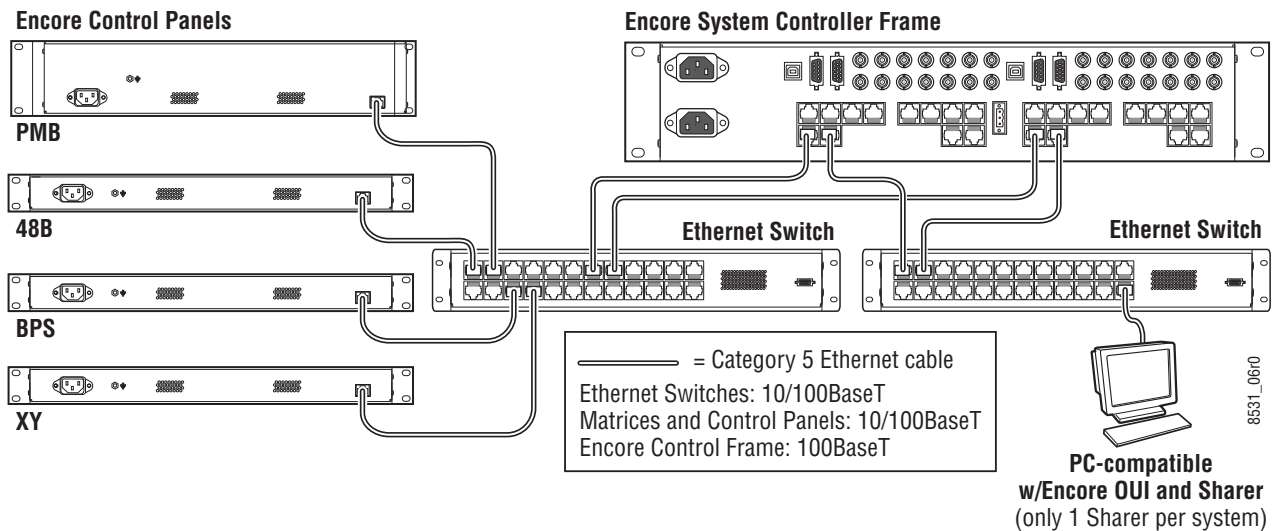
# Install Encore Software (including NetConfig) on PC

**Note**  Detailed instructions for updating the software of an existing Encore system are presented in the separate *Encore Release Notes*. The procedure below is intended for first time Encore installations.

1. Quit all programs on the configuration PC and disable any virus protection programs or firewalls. You will need administrator privileges and any appropriate passwords for your PC.

2. Insert the Encore System Software CD into the PC. If the Installation Program doesn't start up automatically, double-click **Setup.exe** on the CD.

3. Follow all the instructions displayed on the screens that appear, choosing the default settings.

4. When the Select Encore Components Screen appears, the Sharer and Default Database boxes may not be selected (as shown on the left of Figure 31).

*Figure 31.  Select Encore Components Screen*
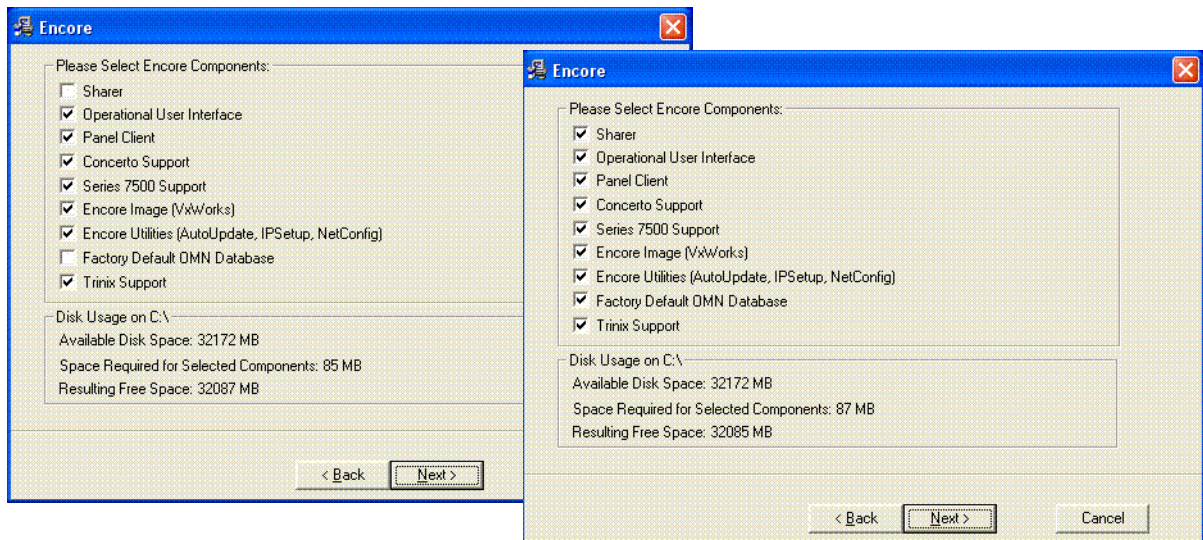


5. Because you are installing a completely new Encore system, select the **Sharer** and the **Factory Default OMN Database** checkboxes, and make sure the **Encore Utilities** is also selected (which installs NetConfig). You can safely check all the other boxes on this screen. To save disk space on your PC, if you know the system will not control a specific matrix type (Concerto, 7500, Trinix) you can uncheck the boxes for unused hardware.

**CAUTION**  If you are working on an existing Encore system, do NOT install the default database. This overwrites your existing configuration. To update Encore software follow the procedures in the separate *Encore Release Notes*.

**6.** Continue following the instructions on the screens displayed, selecting the defaults, and then run the software installation.

**7.** After the first set of files are transferred, a screen appears asking you to confirm the IP address of the Sharer Network (Figure 32). The IP address of the network interface cards (NIC) in use on that PC will be listed. If multiple NICs are installed you must select the one that will be used by Encore (it should have the 192.168.0.102 default IP address).

*Figure 32. IP Address for Sharer Screen*
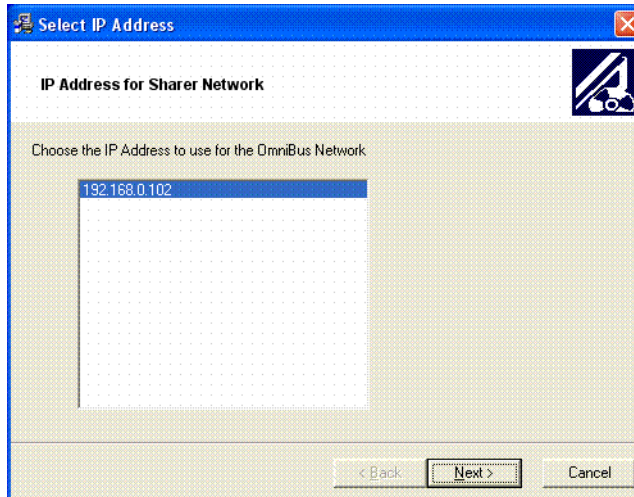


**8.** Complete the software installation, allowing time for the remaining files to be copied to the PC.

When complete, your PC will have all the Encore software and utility programs (including NetConfig) required for system configuration and operation.

If you were updating software on an existing Encore system, at this time you would need to load the new software to the system devices using your PC and NetConfig. For this initial system setup procedure we assume the latest software has already been loaded on the System Controllers and control panels, but we will check the versions to make sure.

## Verify System Components with NetConfig

### About NetConfig

NetConfig is a multipurpose software utility for managing Grass Valley devices. Refer to the separate *NetConfig Instruction Manual* for additional information.

## Launch NetConfig
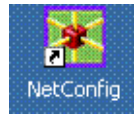
The latest version of NetConfig is included on the Encore Software CD, and is installed on a PC by choosing the **Encore Utilities** checkbox. During software installation a shortcut to NetConfig (as shown on the left) is automatically installed on the PC desktop.

1. Double click on the **NetConfig** shortcut icon to launch the application.

2. The NetConfig screen will appear (Figure 33).

*Figure 33.  NetConfig Screen*
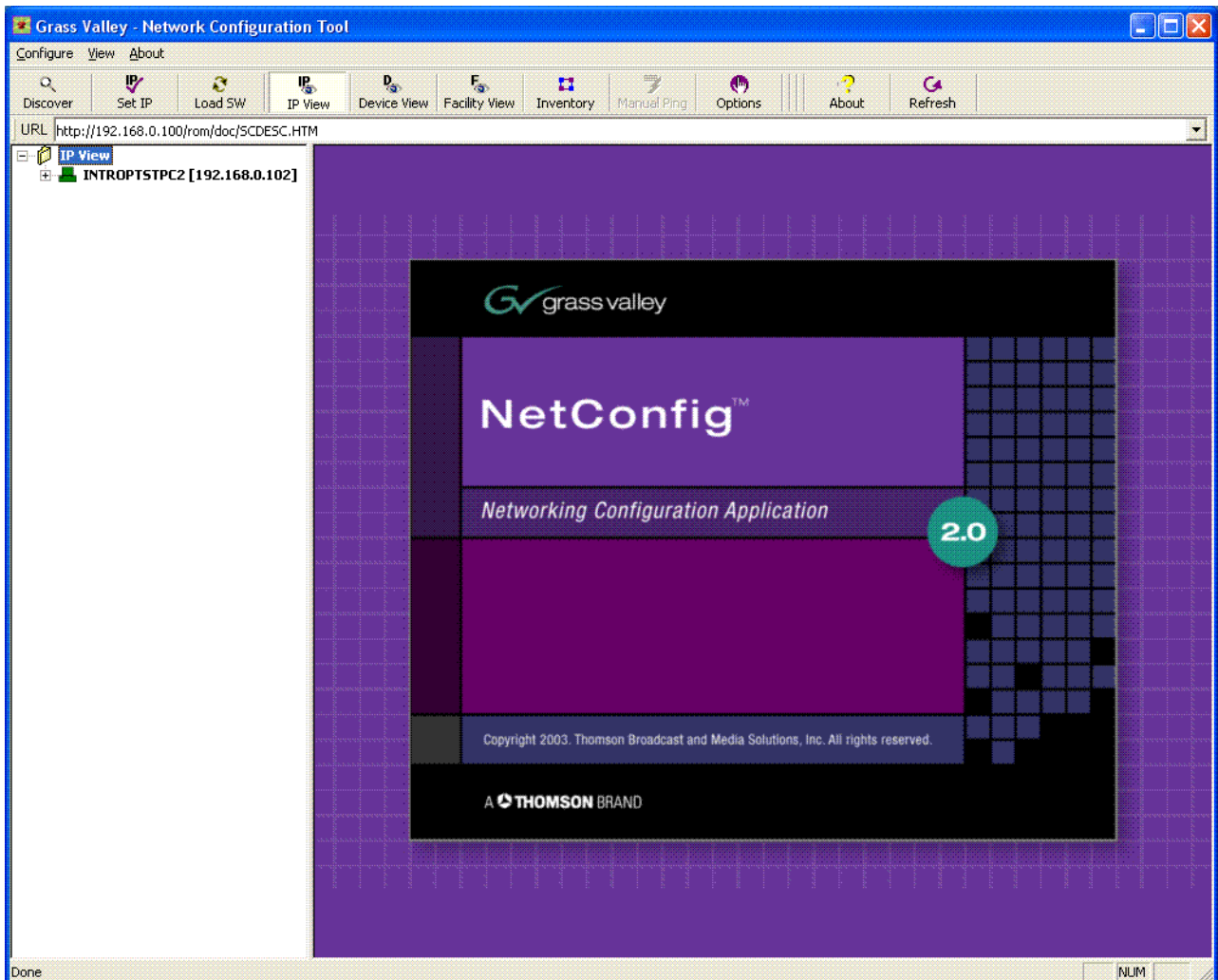
## Confirm Component Settings

**3.** Select the **IP View** tab at the top of the NetConfig screen if it is not already selected, then click on **IP View** on the left side of the screen. The name of the configuration PC along with its IP address will appear. Click on the box beside it to open a hierarchy display of the devices NetConfig has discovered on the network (Figure 34).

*Figure 34. NetConfig IP View with Default Encore Devices*
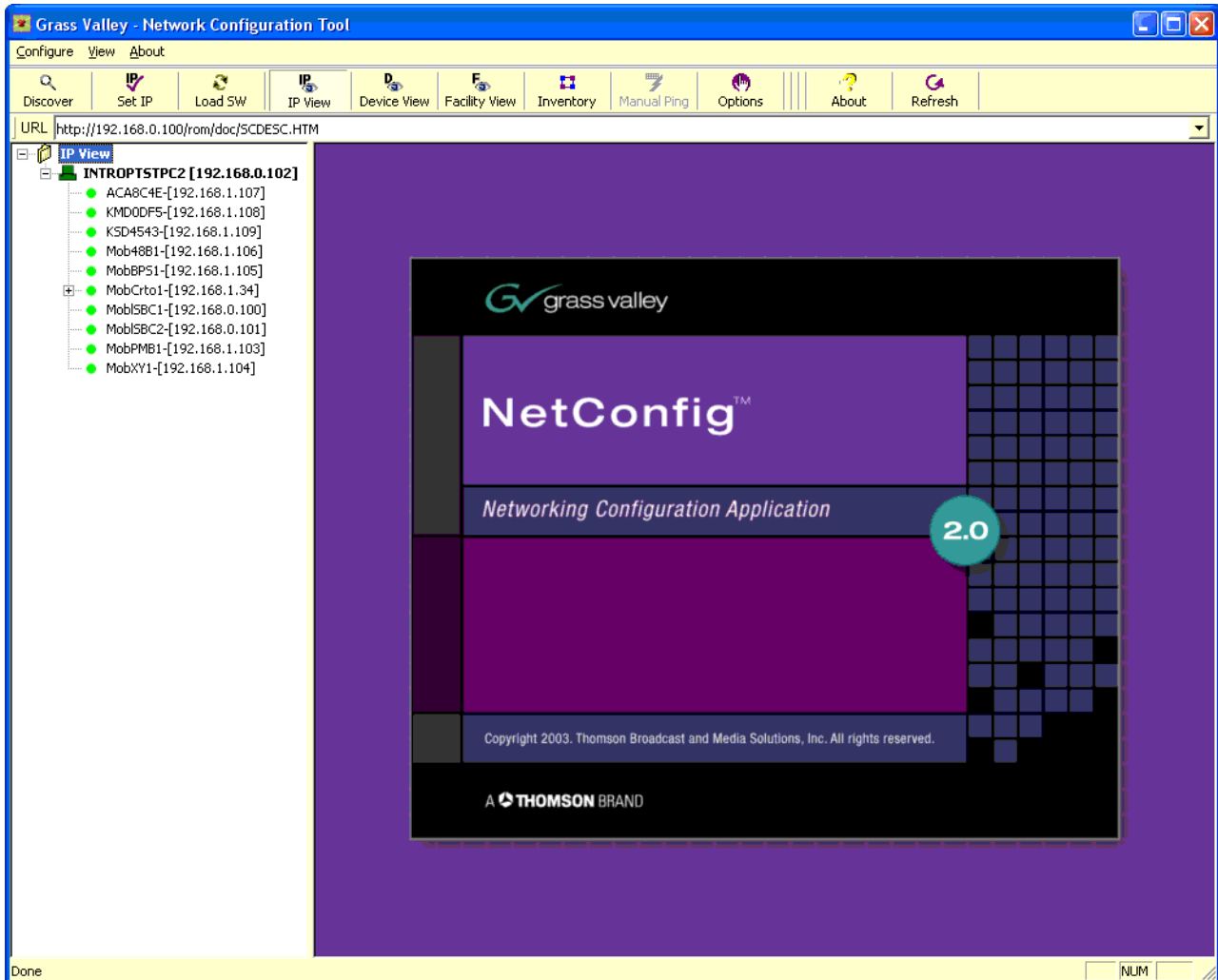


**4.** Clicking on the name of a device opens a web page for that device on the right side of the screen (Figure 35). You can check the software versions and IP addresses of that device by clicking on links on the page (**System Controller Description** or **System Controller Network** for example).

*Figure 35. Encore System Controller Web Page*
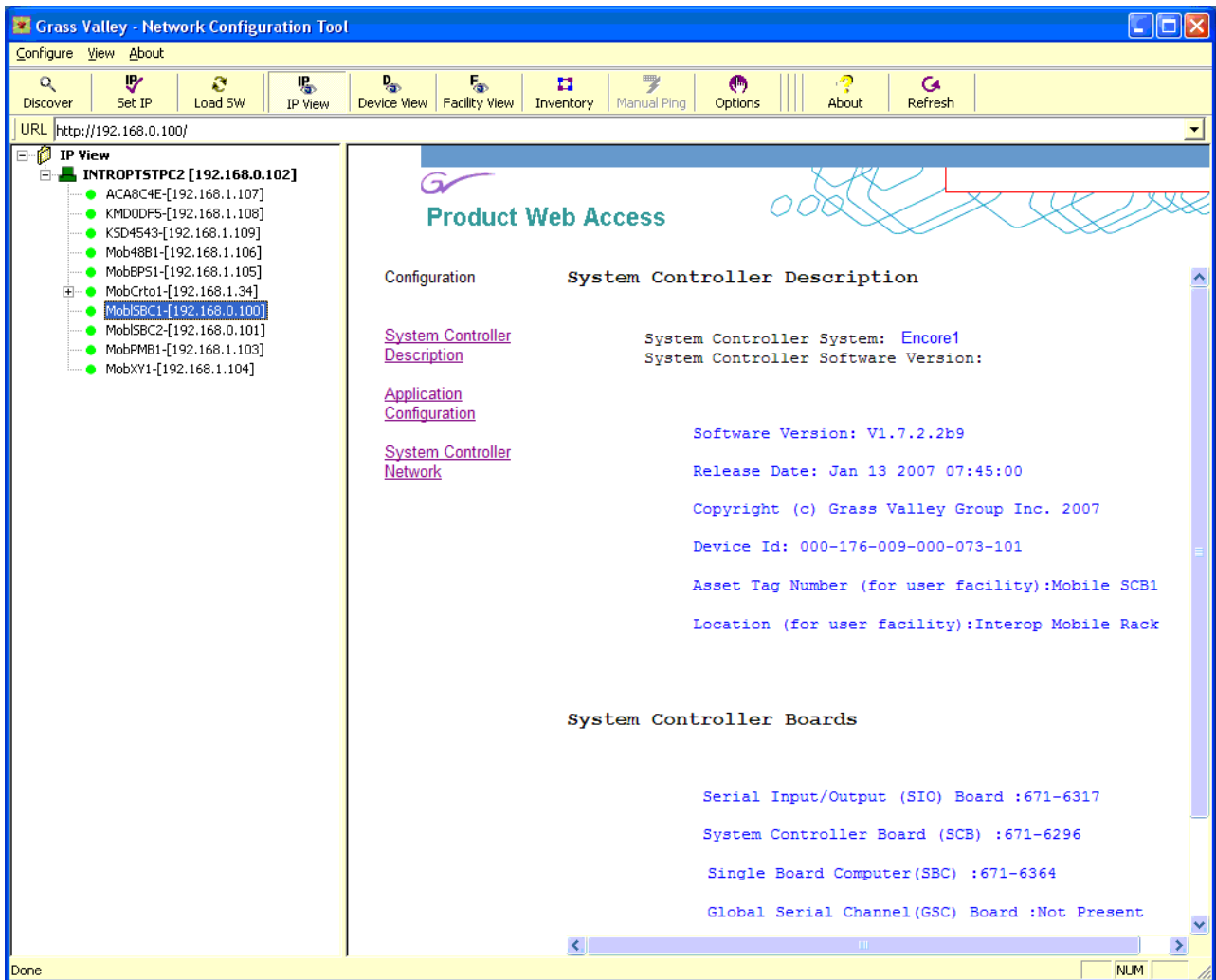


**5.** Confirm that the correct version of software is installed on all the Encore devices. If older software is found, those devices should be updated. Compatible versions of software should be present on all devices on the network. Refer to the separate *Encore Release Notes* for the latest software update procedures.

## Duplicate IP Addresses

Devices with duplicate IP addresses cannot reside on the same network. This can occur if new devices with the same factory default IP addresses are installed. Resolving duplicate IP addresses is easily accomplished with NetConfig.

**1.** If a device is installed on the network with the same IP address as another device, when the new device is discovered a warning message will be displayed. The IP View will also show the two devices with the same address with an IP symbol as shown in Figure 36.

*Figure 36.  Devices with Duplicate IP Addresses*
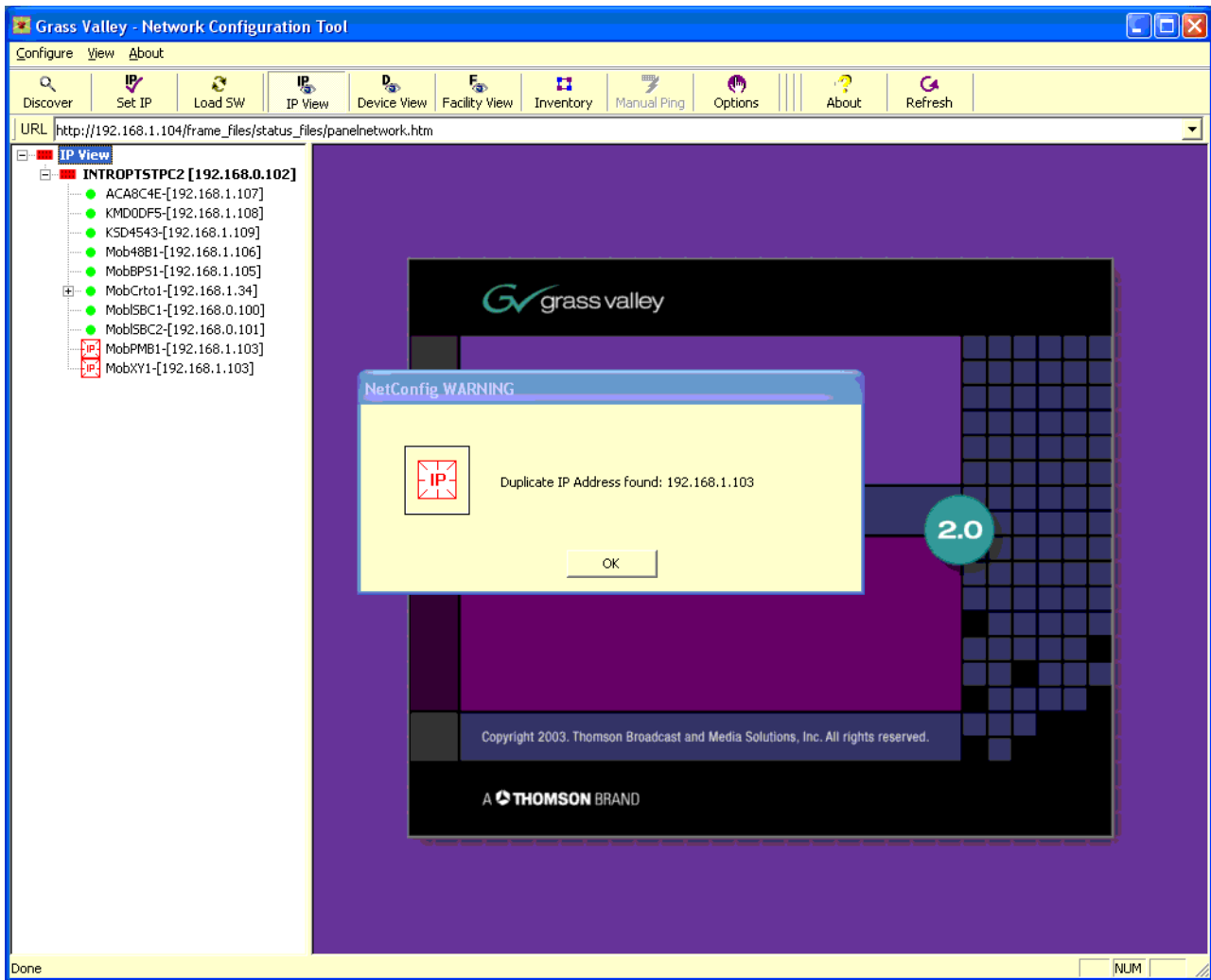


## To Resolve Duplicate IP addresses:

**1.** Select the NetConfig **Set IP** icon on the toolbar or the Device IP
Addresses in the Configure pull-down.

*Figure 37.  Set IP*
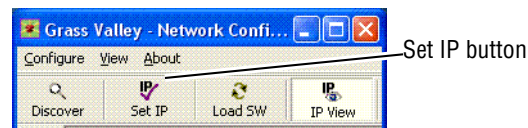
**2.** Highlight one of the devices with a duplicate IP address (Figure 38).

*Figure 38.  Duplicate IP Device Selected*
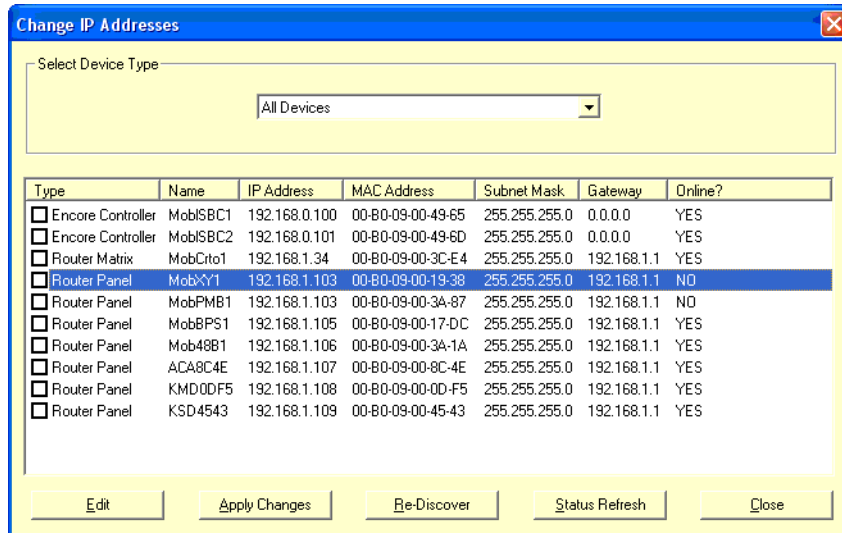


**3.** Click **Edit**, then change the last octet of the device's IP address to be unique. The first three octets of all the IP addresses must be identical, so all the devices are on the same network.

*Figure 39.  Change IP*
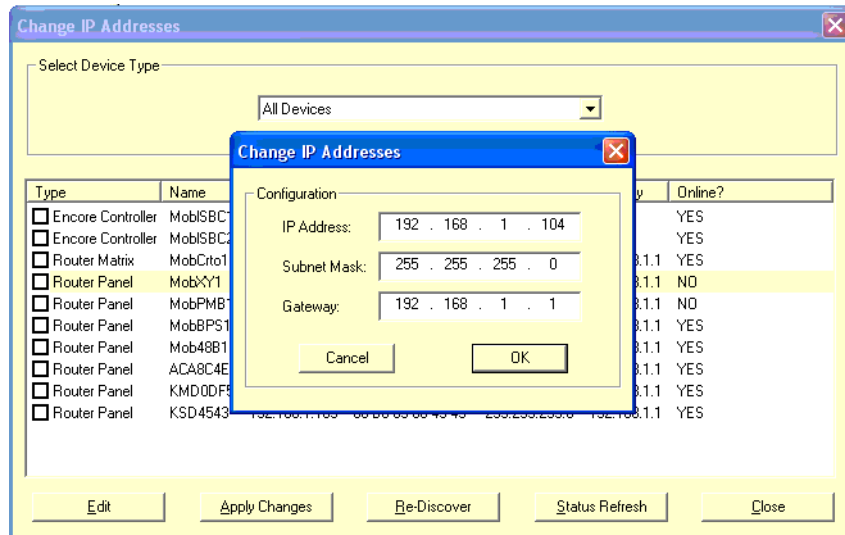


**4.** Click **OK**, then click on **Apply Changes**. The device resets and the new IP address will then be reported in the left pane of the NetConfig screen.

**Note**　　To identify a specific remote panel when several are connected you can send a reset command to a panel and see which panel buttons go off and back on.

# Specify System Controller Applications

Each Encore System Controller needs to also be configured on its web page to load the applications it will be using. For this initial setup, the System Controllers need to be configured to load and run the Panel Server and Router Control applications. These may already be set at the factory but you should check these settings.

## Slot 1 (Left) SCB

1. Find and double-click the System Controller in the left pane of the NetConfig window with IP 192.168.0.100.

2. When the home page for the device opens in the right pane of the NetConfig window, click the **Application Configuration** link.

3. When the Application Configuration page opens, confirm that the Panel Server application and Router Engine boxes are checked (Figure 40).

*Figure 40. The System Controller Application Configuration Page*
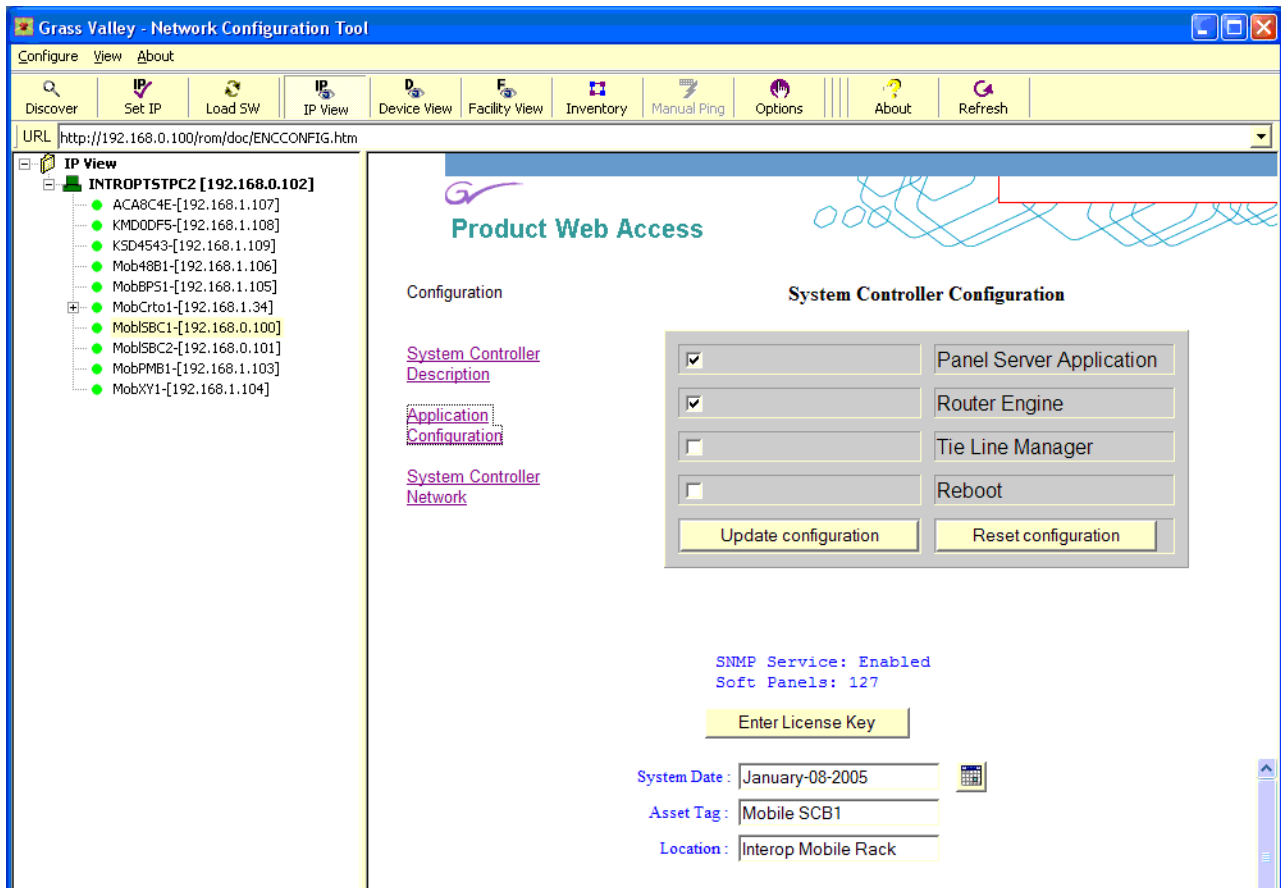
4. If those boxes do not have marks, check them and also check the **Reboot** box. This will make the System Controller reboot to update it with its new applications.

5. Click the **Update configuration** button to reboot the SCB and enact the changes.

### Slot 2 (Right) SCB

Find and double-click the System Controller in the left pane of the Net-Config window with IP 192.168.0.101 and repeat the steps above, if necessary, to specify the Router Control and Panel Server applications.

## Initialize the Encore System

You can now launch the Encore applications on the configuration (Sharer) PC that are required to run the system.

1. Run the **Watchdog** application by clicking on its (desktop icon. This launches the Sharer application and ensures it keeps running.

**Note**    When the Sharer Watchdog program is launched it detects whether a Sharer is already running on the network, and if found terminates the launch with the message **Sharer is already running on the network at IP ADDRESS**.

**Note**    Always launch the Sharer with the Watchdog application, not directly, to ensure the Quick CPS Salvo Startup feature is active (see page 207).

2. Run the **System Manager** application by clicking its icon on the desktop (Figure 41). After the application launches you can minimize (but do not close) the System Manager window.

*Figure 41. System Manager Application Window*

**3.** The Windows task bar should now indicate all the open applications.

*Figure 42. System Manager Application Window*



**4.** Now reset both SCBs by pushing the reset button of each controller. This will make each SCB acquire its default configuration from the Sharer running on the PC. All the control panels will also be sent default configurations.

*Figure 43. System Manager Application Window*



SCB Reset Buttons
(on top of board below handle)
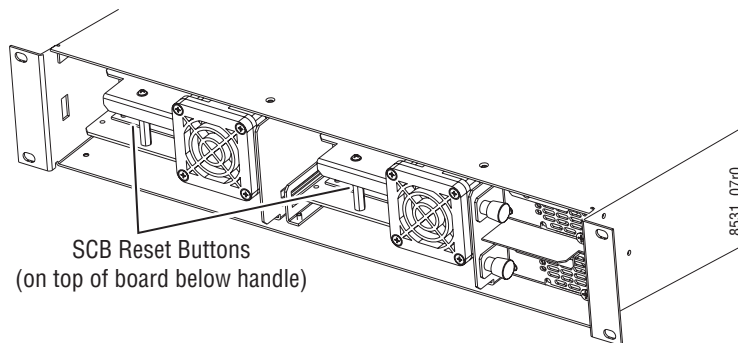
**5.** The control panels should now have illuminated tally buttons, and panels with displays will probably report VTR1 (which is the name of the first Source and Destination in the default database).

Your Encore system should now be ready for its initial test.

## Test Initial System Functionality

**1.** With two control panels operating and the same Destination selected on both panels, push a new Source button on a panel. The button tally lamp should change on both panels to reflect the newly selected Source on the dummy matrix.

**2.** Gently pull the Slot 1 SCB on the left out of its slot a few inches so its indicator lights go off. This disables the Master Panel Server and Router Control applications, but the Mirrors of those applications running on the other SCB should automatically take over.

**3.** Again, select a new Source buttons on a control panel. The tally lamps should change the same as before.

**4.** Gently reinsert the SCB fully into its slot.

This confirms that all the Encore system components are communicating and ready for further configuration.

## Confirm Master/Mirror Sync Operation

You can check that the Master and Mirror applications are properly in sync using the Encore OUI.

**1.** Launch the Encore OUI by clicking on its icon on the desktop.

**2.** Log on to the OUI by clicking on the **Start** button on the lower right side of the screen and entering **sys** (the default user ID) (Figure 44).

*Figure 44. Encore Log On*
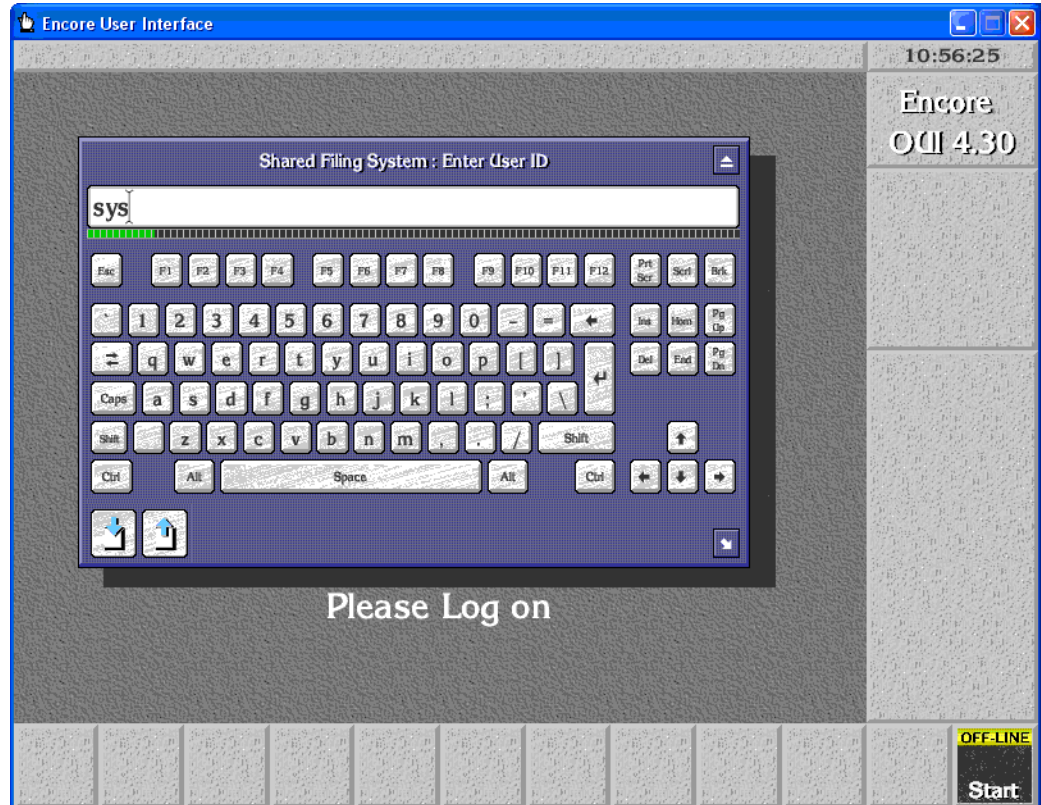
**3.** The Welcome to Encore screen appears. Click on an empty button at the bottom of the screen, and select **Router Controller 1** from the list to launch that application (Figure 45).

*Figure 45. Selecting the Router Controller 1 Application*
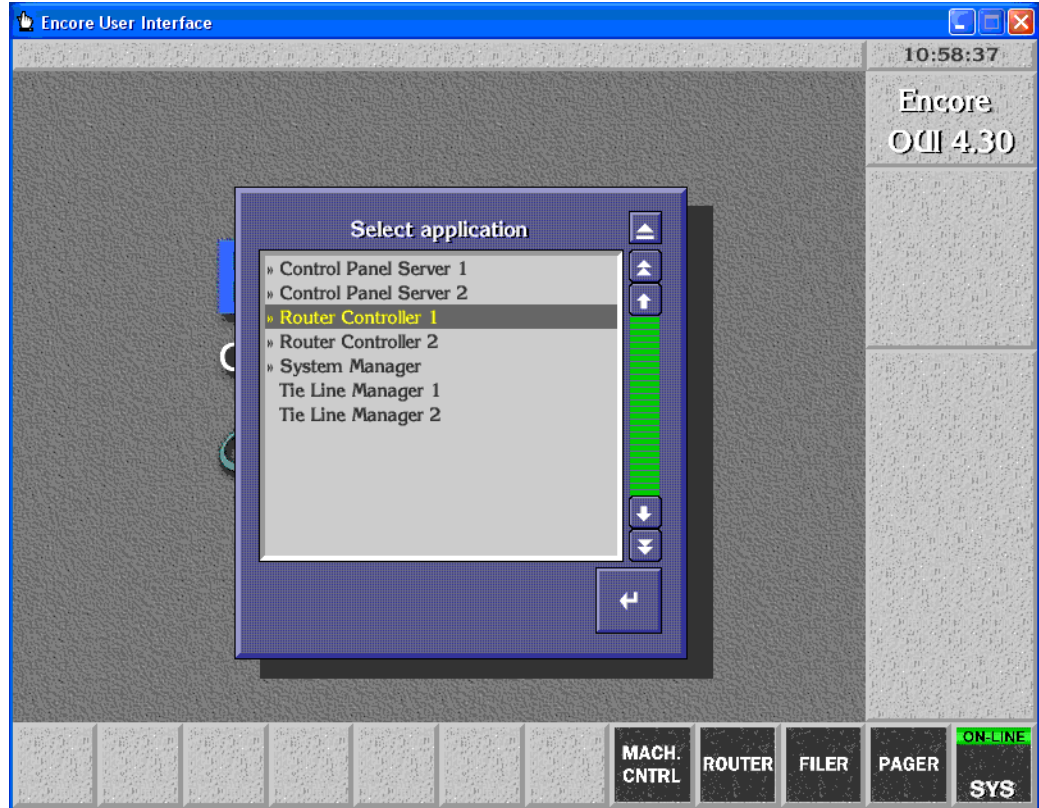
**4.** Select **Config** on the right side of the screen. Confirm that the filing mode is **Sharer** and its Redundancy Mode is **Mirror Master** (Figure 46).

*Figure 46.  Router Controller 1 Initial Configuration Screen*
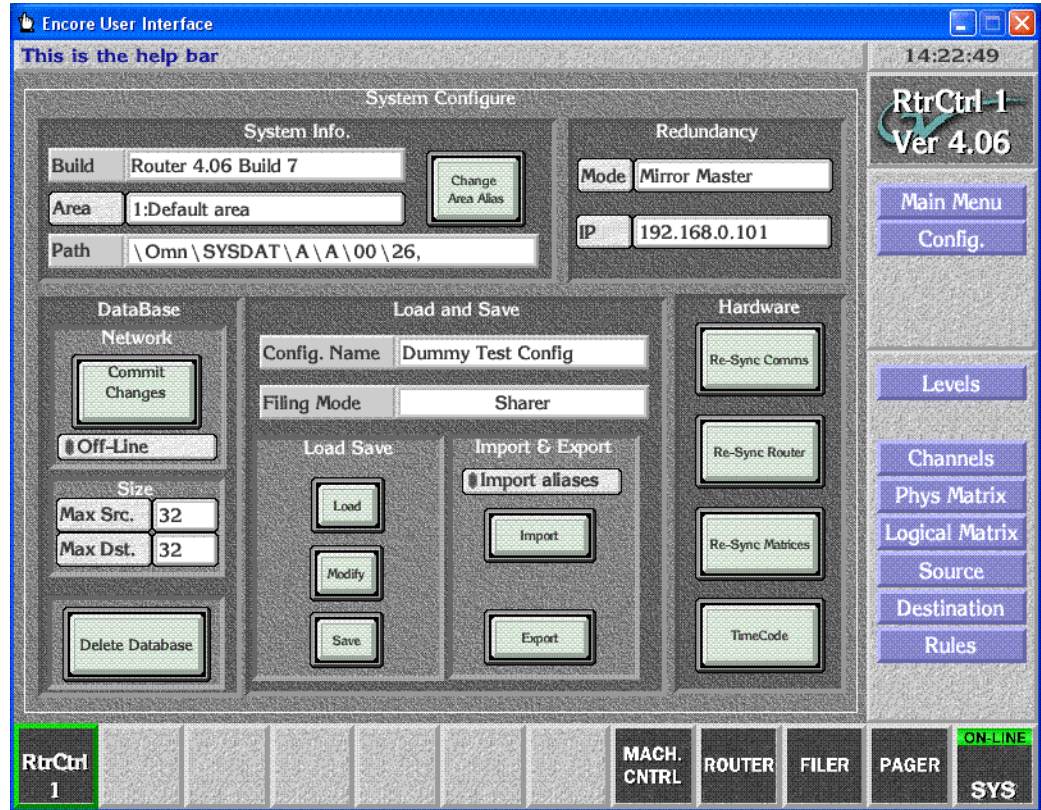
**5.** Click on another empty button, select **Router Controller 2**, select **Config**, and confirm that its filing mode is **Sharer** and its Redundancy Mode is **Mirror Slave** (Figure 47).

*Figure 47. Router Controller 2 Initial Configuration Screen*
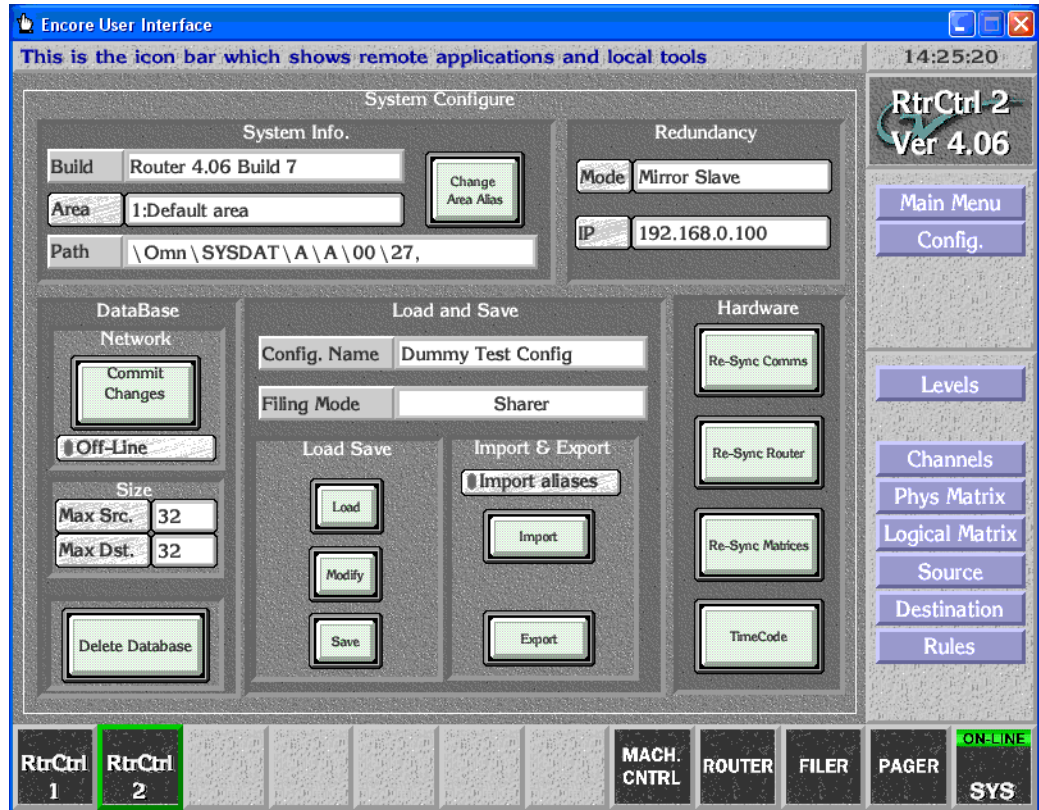


This confirms both Router Control applications are operating correctly.

**6.** Click on another empty button, select **Control Panel Server 1**, select **Config**, and confirm that its filing mode is **Sharer**, its status is **In Sync**, and Redundancy Mode is **Mirror Master** (Figure 48).

*Figure 48. Control Panel Server 1 Initial Configuration Screen*
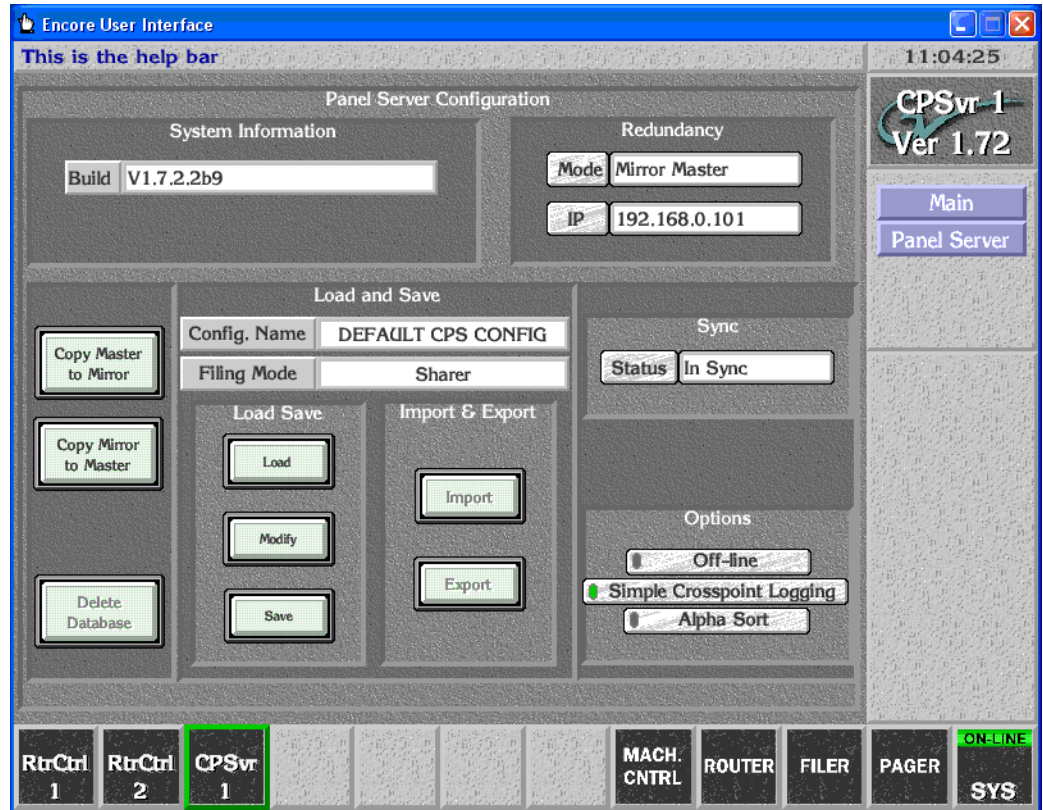
**7.** Click on another empty button, select **Control Panel Server 2**, select **Config**, and confirm that its filing mode is **Sharer**, its status is **In Sync**, and Redundancy Mode is **Mirror Slave** (Figure 49).

*Figure 49. Control Panel Server 2 Initial Configuration Screen*
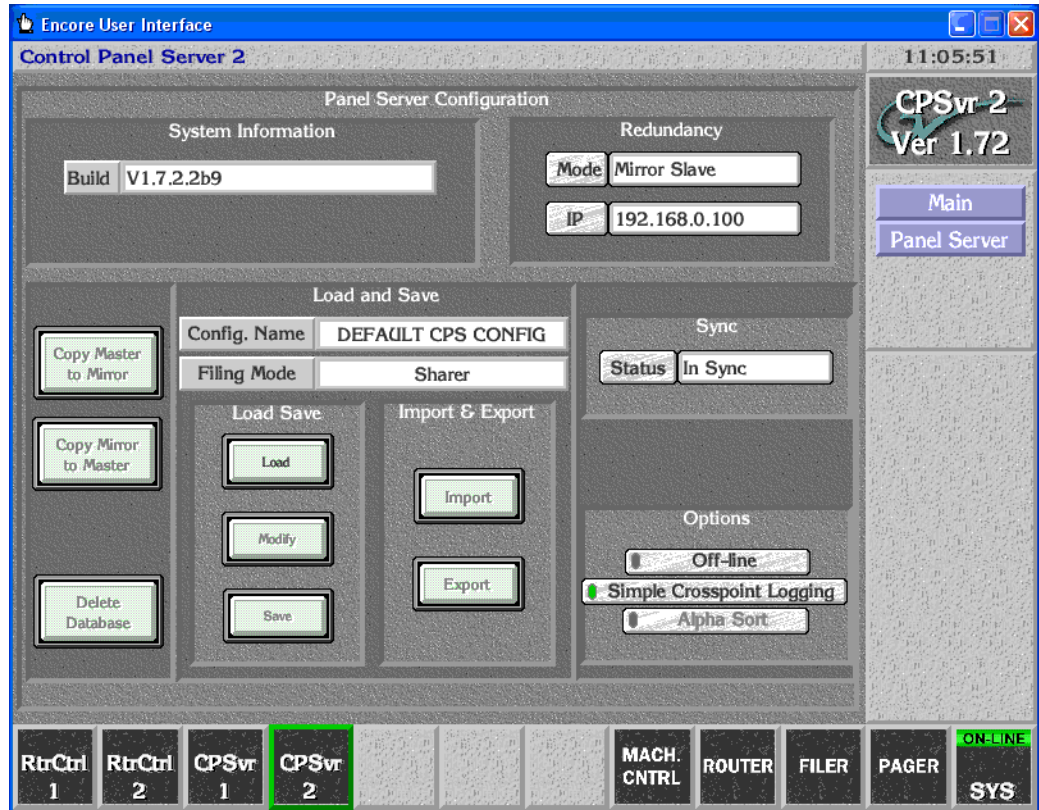


This confirms that both Panel Servers are operating correctly.

**Note** If the control panels do not tally or a filing mode of **Local** is reported, a problem exists in the default configuration that should be resolved before proceeding further. Contact Grass Valley Customer Support for assistance.

# Manual Initial System Setup (Without Default Database)

Installing the default database is not required to get an Encore system con-figured for the first time, but some additional steps will be necessary. Avoiding the default database allows you to use non-default IP addresses from the very start of the installation, which makes it possible to install the Encore system onto an existing network.

Differences in this procedure from that used with the default database include:

- The Special Application is required to logon to the Encore system,

- The Encore applications need to be registered, and

- Engines, Stations, and Users will be added manually.

**Note**    These procedures are for a single Area system, using the Default Area. If you have more than one Area, see *Multiple Area Encore Systems* on page 89.

## Preparation

### Create Network

1. Connect the Encore devices together on the network in a manner similar to that described earlier (see *Create Default Encore Network* on page 55), using two Ethernet switches. You will need to know the IP addresses of the Encore Sharer PC, all the Encore workstations, and all the Encore devices on the network.

### Load Software

2. Load the Encore software onto the configuration PC using the same procedure described earlier (see *Install Encore Software (including NetConfig) on PC* on page 57).

### System Controller Applications

3. Identify what applications the System Controller will load and run, using the same procedure described earlier (see *Specify System Controller Applications* on page 64). If you will be using Tieline Manager, make sure that application is also selected.

### Initialize the System

4. Initialize the system using the same procedure described earlier (see *Initialize the Encore System* on page 65).

## Logging On Using Special Application

**Note**    Without a default database in place, a slightly different log on procedure is required, which employs the **Shift** key.

*Figure 50.  The Initial Encore OUI Desktop*
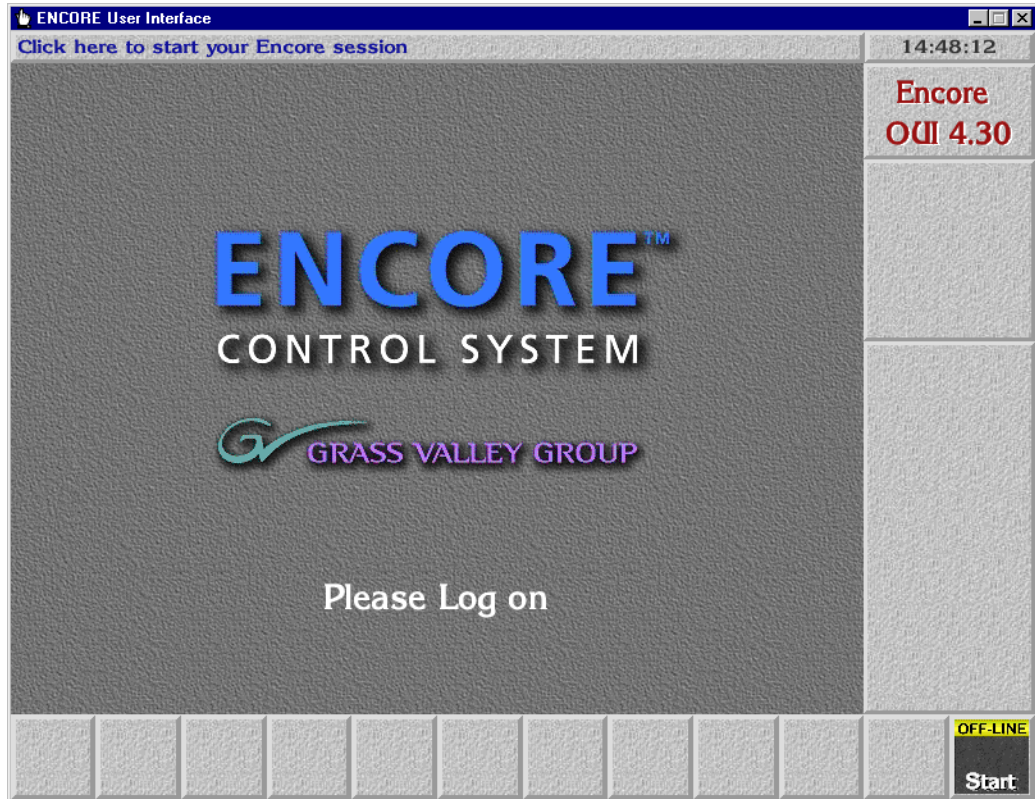


5. Press the **Shift** key and click the **Start** button in the bottom right corner of the window.

6. Select **Special Application** in the Choose an Application list window (Figure 51) which appears, then click the **Enter/Return** button in the bottom right corner of the list window.

*Figure 51. Special Application List Window*
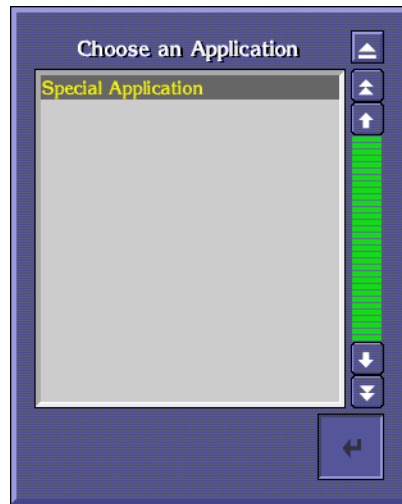


7. When the Machine address window (Figure 52) appears, type the IP address of your configuration PC and click the **Enter/Return** key in the Machine address window.

*Figure 52. Machine Address Window*



8. When the Choose an Application list window (Figure 53) reappears, select !App_MAN3 and click the **Enter/Return** button in the bottom right corner of the list window.

*Figure 53. Special Choose an Application List Window*
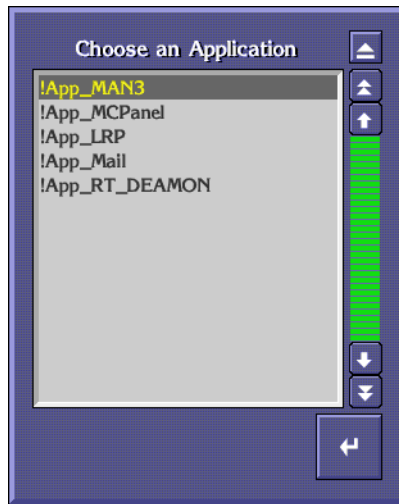


**9.** When you're prompted to enter a user ID, select any existing character(s) and replace them with sys in the user ID field, then press **Enter/Return**.

*Figure 54. Enter User ID Window*



**10.** The System Manager window appears (Figure 55).

*Figure 55. System Manager Window*
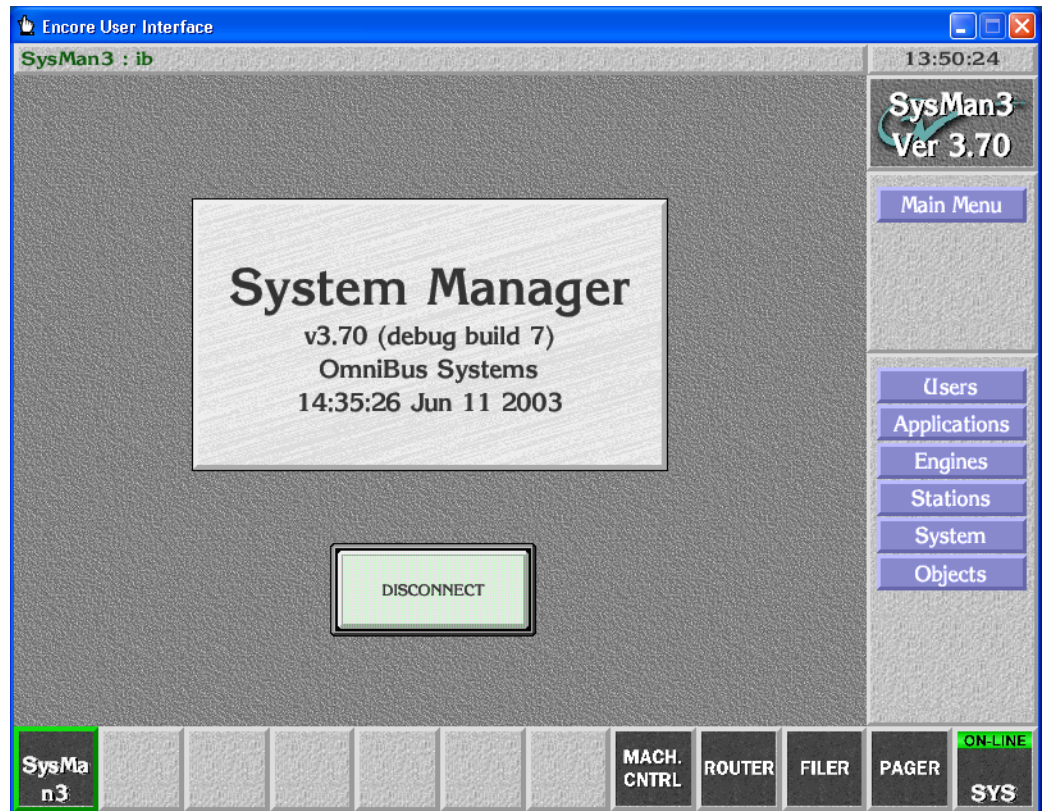


## Registering Your Applications

**11.** On the System Manager window, click the **Applications** button in the Main Menu section.

**12.** Click the **Add** button at the bottom left of the Application details window (Figure 56) which appears.

*Figure 56. Application Details Window*
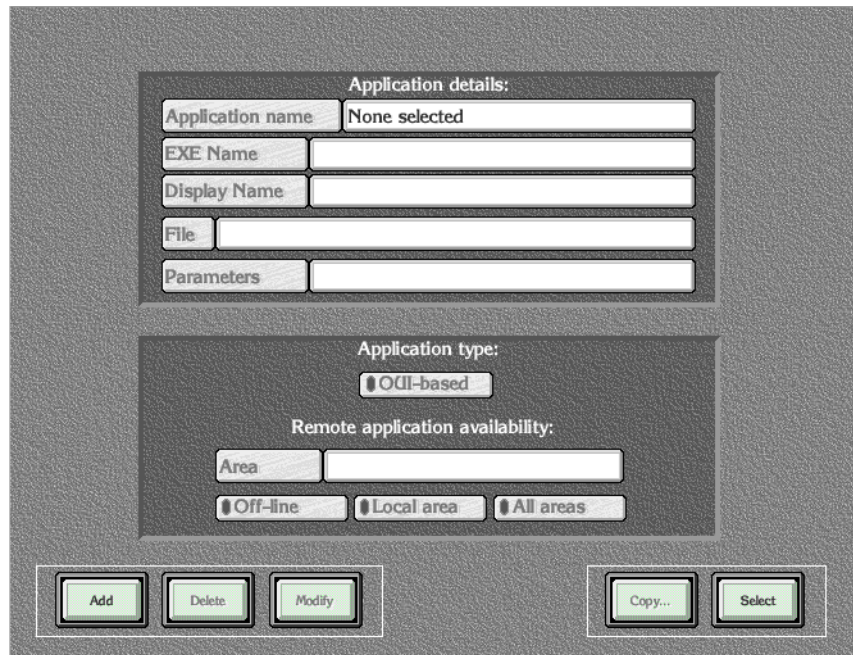


**13.** When the Enter New Application Executable Name window appears, type the application's executable name, `!APP_Route,` and click the **Enter/Return** key.

**14.** When the **Enter new application name** window appears, type `Router Control`, and press the **Enter/Return** key.

This entry becomes the application name users will see in the **Select Application** list window in the future when they want to launch an application.

**15.** When the Application details window appears displaying the Exe(cutable) Name and Application Name you entered in Step 13 and Step 14 respectively, click in the **Display Name** field and type `Rtr Cntrl` in the **Enter new text** window.

The Display Name will be the name you see in both the Title Box and the Task Bar when you're running the application.

**16.** Press the **Enter** key to finalize your entry and dismiss the Application Details window.

**17.** Click the **All Areas** button to make the application you're registering available in all Areas.

**Note** If you have more than one Area in your system, see *Multiple Area Encore Systems* on page 89.

**18.** Click the **Modify** button to save your entries.

**19.** Repeat Step 12 through Step 18, substituting the executable, application, and display names for each of your remaining applications as indicated in Table 5.

*Table 5. Software Executable, Application, and Display Names*

| Full Name | User Can't Change | User Can Change With System Manager | |
|---|---|---|---|
| | EXE Name | Application Name | Display Name |
| Control Panel Server | !APP_CPServer | Control Panel Server | CP Svr |
| System Manager | !APP_Man3 | System Manager | Mgr Svc |
| Tie-Line Management | !APP_TLM | Tie-Line Manager | TLM |

**20.** When you're done adding applications, remember to click the **Modify** button, then click the **Main Menu** button on the Menu Bar to return to the Main window in System Manager.

## Adding Engines

Once you've registered the application(s) you want to run somewhere in the Encore environment, you must identify the engine(s), host(s), or server(s) which will run those applications. For example, an Encore System Controller always runs the Control Panel Server application, but it is frequently also the engine running the Tie-Line Manager applications. The Sharer PC is always the engine running the System Manager application, but other applications may run on it as well. Remember, however, that Encore's system architecture allows you to distribute applications among multiple engines to balance the load.

Follow these steps to add engines.

**Note** Before you proceed, you'll need to know the IP address of the engine(s) you want to add.

**21.** From System Manager click the **Engines** button on the Main Menu. The Engines window appears (Figure 57).

*Figure 57.  Engines Window*
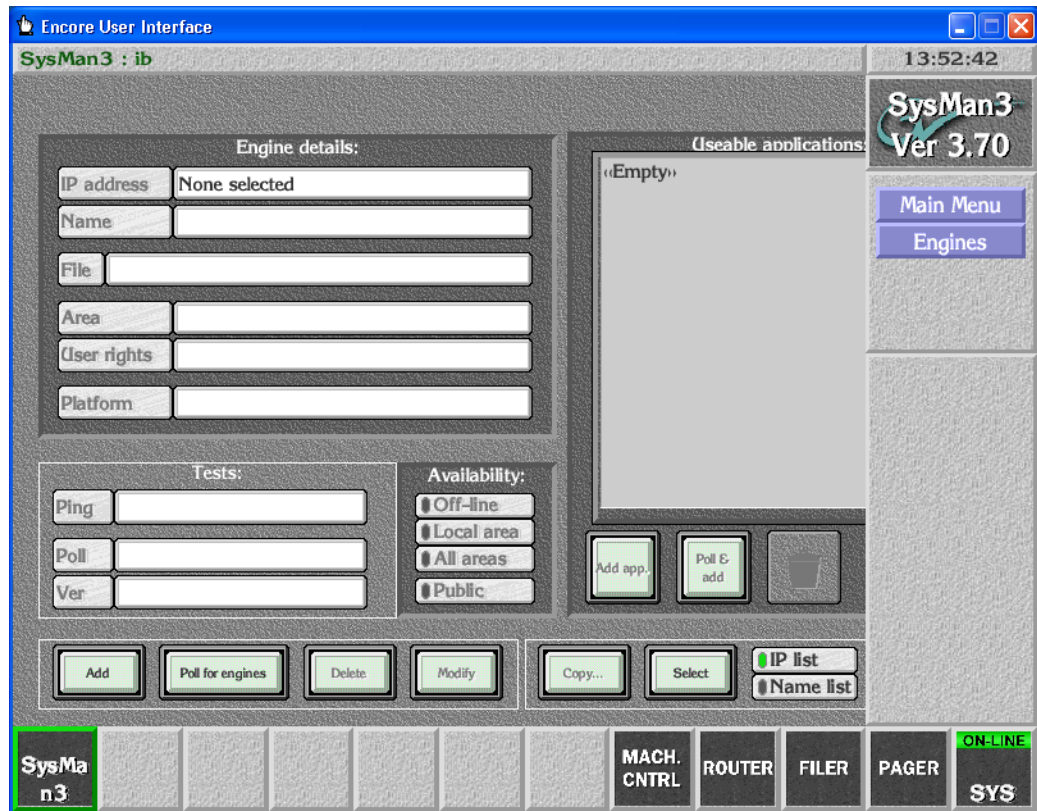


22. Click the **Add** button in the bottom left corner of the window.

23. When the **Enter new engine IP address** window (Figure 58) appears, type the IP number of the engine you're adding and press **Enter/Return**.

*Figure 58.  Entering the Engine IP Address.*



24. In the **Enter new engine name** window which appears, type the name you want to call the engine and press **Enter/Return**.

    For example, in the case of a System Controller (a single board computer in the Encore frame), you might want to call it SysCntrl-1.

**25.** Back in the Engines window click the **Platform** field and choose the type of engine from the **Select platform of device** list window, then click the **Return** button.

*Figure 59. Selecting the Platform of the Device*
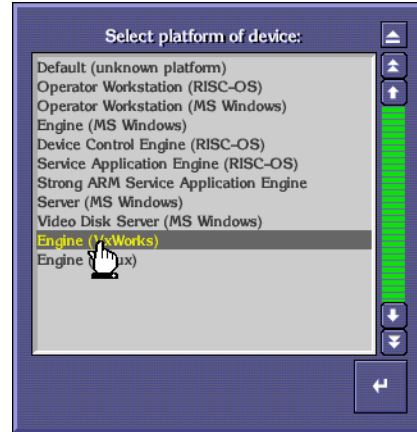


In the case of a system controller, choose `Engine (VxWorks)`.
If you're running everything on a PC, choose `Engine (MS Windows)`.

**26.** Click the **All Areas** button in the Availability portion of the window to make the engine and the applications it's running available in all Areas.

**Note** If you have more than one Area in your system, see *Multiple Area Encore Systems* on page 89.

**27.** Now click the **Add app.** button beneath the **Useable applications** scrolling list.

**28.** In the **Select application(s) to add to list** window which appears, select all of the applications you want this engine to run.

In the case of a System Controller, you must run the Control Panel Server application on it. You may also want to run Router Control and Tie-Line Manager on this engine or distribute them on other engines in your system.

**29.** Once you've selected all of the applications you want this engine to run, click the **Return** button and the applications you've chosen will appear in the Usable applications list in the top right portion of the Engines window.

**30.** Click the **Modify** button to save your changes.

**31.** If you want to add more engines, repeat Step 21 throughStep 30.

**32.** Click the **Main Menu** button to return to System Manager's main window.

## Adding Stations

Use this procedure to add workstations to your Encore environment. You must have at least one workstation — even if it's also the configuration PC — on your Encore network. As you might guess, these additional workstations will be able to run the applications you assign to them, but will not be able to run administrative tools or perform administrative tasks. Average, day-to-day operations should be performed from a workstation.

**33.** From within System Manager and logged in as an administrator, click the **Stations** button on the Main Menu. The Stations window which appears (Figure 60).

*Figure 60.  Stations Window*
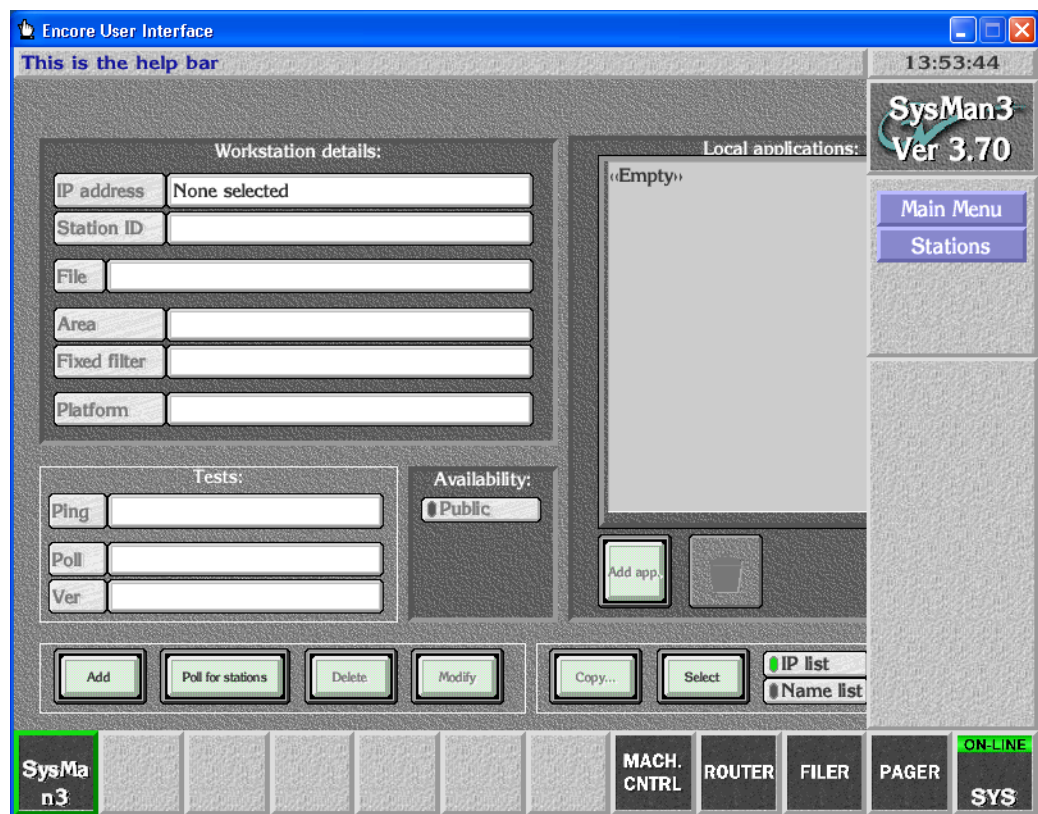


**34.** Click the **Add** button in the bottom left corner of the window.

**35.** When the **Enter new station IP address** window (Figure 58) appears, type the IP number of the workstation you're adding and press **Enter/Return**.

*Figure 61. Entering the Engine IP Address.*



**36.** In the **Enter new station name** window which appears, type the name you want to call the workstation and press **Enter/Return**.

For example, you may want to name the workstation by it's physical location (e.g. Suite A) or it's function (e.g. Technical Director).

**37.** Back in the Stations window click the **Platform** field and choose the type of engine from the **Select platform of device** list window, then click the **Return** button.

*Figure 62. Selecting the Platform of the Device*
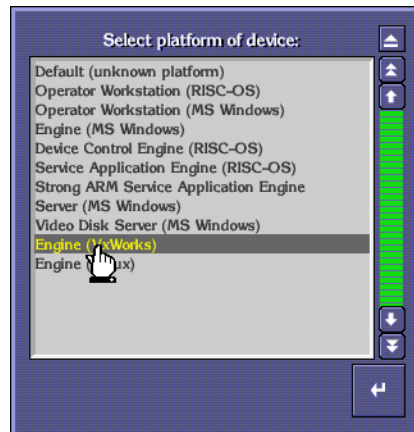


In the case of a system controller, choose `Engine (VxWorks)`. If you're running everything on a PC, choose `Engine (MS Windows)`.

**38.** Click the **Public** button in the Availability portion of the window to make the engine and the applications it's running available to everyone.

**39.** Now click the **Add app.** button.

**40.** In the **Select application(s) to add to list** window which appears, select all of the applications you want this engine to run.

In the case of a system controller, you must run the Control Panel Server application on it. You may also want to run Router Control and Tie-Line Manager on this engine or distribute them on other engines in your system.

**41.** Once you've selected all of the applications you want this engine to run, click the **Return** button and the applications you've chosen will appear in the Usable applications list in the top right portion of the Engines window.

**42.** Click the **Modify** button to save your changes.

**43.** If you want to add more workstations, repeat Step 33 through Step 42.

## Adding Users

In addition to adding engines and stations, you must add users to your Encore system. This procedure allows you to assign their privileges, the applications they can use, and the Areas they can "see."

**44.** From within System Manager, and logged in as an administrator, click the **Users** button on the Main Menu. The Users window appears (Figure 63).

*Figure 63. Users Window*
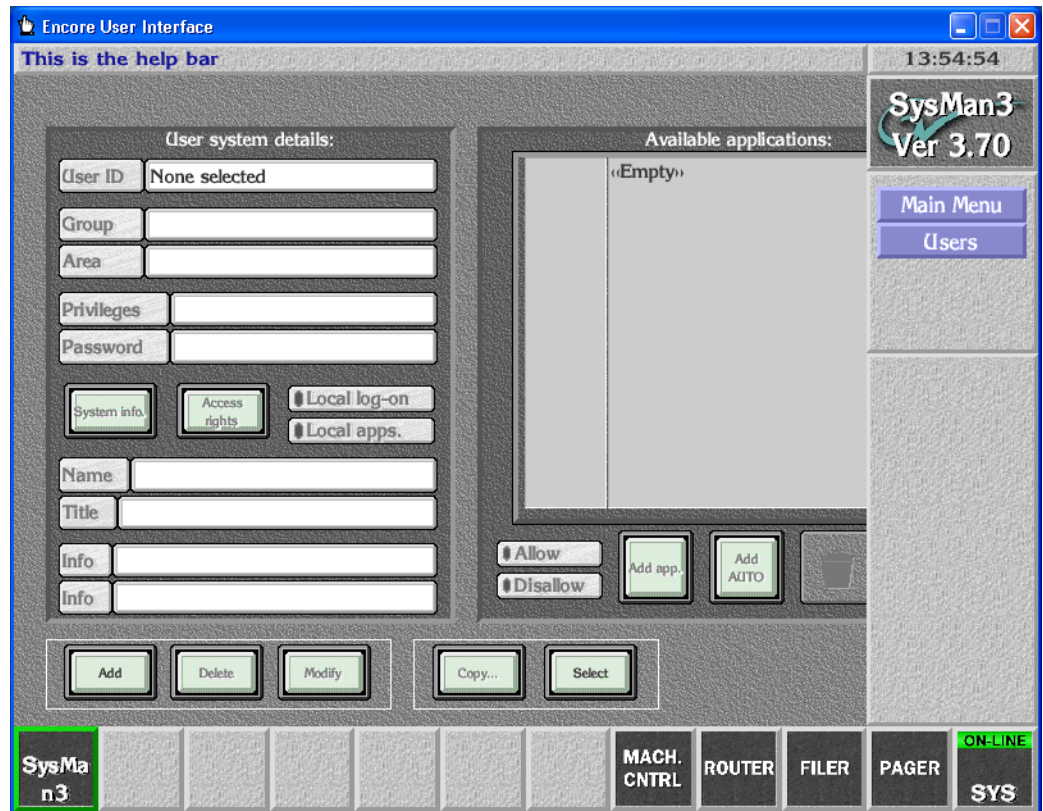


**45.** Click the **Add** button in the bottom left corner of the window.

**46.** In the **Enter new user name** window which appears, type the name you want and press **Enter/Return**.

**47.** Back in the Users window, click the **Add app.** button.

**48.** In the **Select application(s) to add to list** window which appears, select all of the applications you want this user to be able to use.

**49.** Once you've selected all of the applications you want this user to use, click the **Return** button and the applications you've chosen will appear in the Usable applications list in the top right portion of the Users window.

**50.** Click the **Modify** button to save your changes.

If you want to add more users, repeat Step 44 through Step 50.

You Encore system should now be ready for additional configuration.

# Full System Configuration Preparation

Once your basic Encore configuration is complete, you can proceed to configuring the entire system to meet your specific needs. This will include interfacing your router hardware frames (Concerto or Trinix, for example) and configuring your control panels.

Advance preparation is advised, due to the complexity of routing systems, and the importance of this vital part of your facility's infrastructure.

Suggested preparations include:

- Define your Encore system topology, components, and functionality. If you plan to use more than one Encore Area, this fact should be identified from the very start (see *Multiple Area Encore Systems* on page 89).

- Plan your network and system workload distribution.

- Make a list of all the IP addresses involved, and keep the list up to date.

- If you need to change default IP addresses, do so systematically using NetConfig. Change the PC that runs the Sharer first, then change the IPs of the other Encore devices as needed to match. You can use Ping to test lower level network communications if necessary once the IPs have been set.

- Establish naming conventions. For example, if multiple Areas exist you may want to include an Area number as part of the Source and Destination names.

- Prepare written lists of all Areas, Levels, Sources, Destinations, etc.

- Prepare written lists of the control panel names, and carefully define what each panel's capabilities should be. (For example, what Sources and Destinations should be accessible?) Templates can be used to apply the same configuration to multiple panels.

For very large Encore routing systems, or for interfacing with external routing systems, additional configuration steps may be required that are outside the scope of this manual. Contact Grass Valley Customer Support or a third-party system integrator for assistance.

# Redundancy Operation

When an Encore system is operating with redundant components (mirrored SCBs) the two controllers should be in sync. This can be checked using the CP Server application's configuration windows in the Sync Status sub-window.

You may see brief "no sync" messages. It means that the panel servers are in the process of exchanging data related to one or more panels and syn-

chronizing themselves. System redundancy is still functional under these conditions.

If a "no sync" state persists, the Panel Network configurations should be checked to make sure that all the panels have correct values for Primary and Secondary Panel Server IP addresses. Panel communications to both servers is easily verified by looking at the Panel Description Web page at the current primary server status and current secondary server status. Both should report "Server Comm OK."

If there is a "No Mirror" indication, then the opposite controller is offline or not working properly and should be checked.

One way to verify proper fail-over behavior is to take the Panel Server offline using the OUI. The other controller should assume control and allow normal switching to continue.

# SCB Reference Count Server

Encore 1.7.3 and newer software includes a reference count server. This eliminates the need to connect common VITC to redundant SCBs for synchronized Takes.

**Note**     Automation clients require VITC to perform timed Takes.

The Reference Count Server feature works by having one SCB broadcast a reference count, and all other SCBs synchronize to it. Since all the SCBs use a common reference count, they can be configured and operated as redundant pairs without VITC. In case of failure of the server SCB, another SCB takes over broadcasting the reference count.

If VITC is provided to a system running with the reference count server enabled, the reference count server and client software within the SCBs automatically go to sleep and use VITC for synchronizing Take operations.

To operate an Encore system with Router Controller and Control Panel Server redundancy without VITC embedded in the reference signal, follow the steps below.

**1.** Go to the web page of Encore SCB (you can use NetConfig). Go to the **Application Configuration** page and scroll to the **Reference Count Server** section. Enable the **Reference count server**. Repeat this step for each of the SCBs in the network.

2. If you have Concerto or Acappella matrices controlled by the redundant Encore SCBs above, their equivalent internal reference count mechanisms must be turned off so they don't conflict. Go to the web pages of Concerto and Acappella matrices and do the following:

   • For Acappella, go to the **Reference Config** page and in the **Reference Time Server** section disable the **Broadcast field rate time reference** option.

   • For Concerto, go to the **Reference Config** page and in the **Reference Count Server** section disable the **Broadcast frame count** option.

**Note** All SCBs and all controlled Matrices must have their Reference server settings set properly for non-VITC operation synchronized Takes.

Reference count mode changes are immediate (no reset is required). Once enabled the reference count status is reported on the screen (e.g. Client).

## Redundancy Requirements and Notes

• Each redundant Encore application pair must execute in a System Controller set defined as a mirrored pair in either the same or different System Controller frames.

• Redundant pair System Controller Boards (SCBs) must be configured identically regarding system configuration and executing applications and must be executing the same revision application software.

• All configuration tasks (except redundancy configuration) must be done from the master.

• The CP Server should be taken offline prior to making any changes to redundancy parameters. The changes will come into effect only when the CP Server is turned online again or when the CP Server or the SCB is re-started.

• If a CP Server is turned offline and re-started without turning it online, the CP Server will come up in offline mode.

• Copy Master to Mirror and Copy Mirror to Master operations can be initiated from the OUI of the master only.

• Copy Master to Mirror and Copy Mirror to Master operations can be performed when either the master or the mirror or both are offline.

• A CP Server configured as mirror should not be promoted to master mode if the current master CP Server is online. This can be done only after making sure that the current master CP Server is reconfigured either as a mirror, as a standalone unit, or kept offline. This is intended to be done when the SCB running the master CP Server is broken and hence cannot serve the panels either temporarily or permanently.

• If a mirror is promoted to master, the original master will come up in offline mode when it re-starts.

- To determine which SCB is active at any given time, you can use the OUI to check the sync status of the controllers. An Encore SCB running a CPS also turns on its BSY LED if the CPS is either operating stand-alone or is the supervisor in a Master Mirror pair. A supervisor is the CPS that drives the displays and tally lamps of the control panels connected to it. You can also check the Error LEDs on the front edge of the controller boards. LED codes are located in the *Encore Installation and Service Manual*.

# Multiple Area Encore Systems

In large installations, an Encore-controlled routing system can be partitioned into multiple routing Areas, with each Area having its own System Controller and Matrices. This arrangement gives each Area autonomy in configuration and operation without sacrificing inter-Area connectivity. Up to 32 Areas can be configured.

**Note** Tie-lines must be configured and available to route Sources in one Area to Destinations in a different Area (see *Section 7-Tie-Line Manager*).

Configuring multiple Areas can be useful in the following example:

- A facility has two studios, A and B.

- Each studio has its own router.

- Each studio has five VTRs named "VTR 1" through "VTR 5."

By assigning each studio and its components to a different Area, the Encore control system can be divided to provide Area access restrictions, user access restrictions, and router control restrictions. In addition, the Source and Destination names for the different VTRs in both Areas can remain the same. Single Area systems cannot have different Sources with the same names.

Figure 64, which shows a large, highly-redundant system. Note the following:

- Each routing Area has its own dedicated SCB running the Router Control and Control Panel Server applications. Only one Router Control application or redundant pair is allowed in each Area.

- The control panels and matrices in each Area are connected to a unique Ethernet Class C network which is also connected to the EN2 network interface of the redundant SCB pair for that Area. The SCB EN1 interfaces are connected to the facility LAN (along with the PC).

Panels in one Area can be configured to control Destinations in All areas, if desired. If this is not desirable, panel access can be restricted to only one or more Areas in various ways, by using Area exclusion sets, Destination Exclusion Sets, Keypad Areas, etc.

*Figure 64. Two Area Encore System Example*



Encore control panels

192.168.1.10

192.168.1.11

GV Matrix Router

NIC A
connector
192.168.1.1

NIC B
connector
192.168.1.2

Ethernet switch

Ethernet switch

192.168.1.100  EN2

EN2  192.168.1.101

Primary Encore controller

Secondary Encore controller

192.168.0.100  EN1

EN1  192.168.0.101

PC

192.168.0.102

Ethernet switch

192.168.0.200  EN1

EN1  192.168.0.201

Primary Encore controller

Secondary Encore controller

192.168.2.200  EN2

EN2  192.168.2.201

Ethernet switch

Ethernet switch

NIC A
connector
192.168.2.1

NIC B
connector
192.168.2.2

GV Matrix Router

192.168.2.10

192.168.2.11

Encore control panels

Area = Studio A

Area = Studio B

## Network Communications Between Areas

When adding a new Area, an additional Ethernet switch connected to the configuration PC will be required. This switch will act as a gateway between the Areas.

### Route Table (Multi-Area Systems Only)

If routes have not been established to cross networks, you may need to execute route commands to allow NetConfig access to other Areas. You can create and run a .bat file at least once to create the routes. Placing this .bat file in a startup directory on the PC will help ensure it will run.

An example of the commands for this .bat file for a default Encore system with two Areas with the second SCB set to 192.168.2.0 is:

```
route add 192.168.1.0 mask 255.255.255.0 192.168.0.100
route add 192.168.2.0 mask 255.255.255.0 192.168.0.101
```

The first entry in each row is the IP address of that network (in this example the "0" is a placeholder), the second entry is the subnet mast, and the third entry is the EN1 IP address of the SCB in that network.

If you need help, contact your network system administrator or Grass Valley Customer Support for assistance.

## Hardware Installation for a New Area

Refer to Figure 64 for an example system.

1. Install the matrix router, SCB(s), and control panel(s) in the new Area.

2. Install an Ethernet switch connected to the Configuration PC to span the networks.

3. Use NetConfig to configure the IP addresses of the new SCB(s) and control panels.

## Software Configuration

### Use the OUI and System Manager to Add an Area:

1. Launch the Sharer, System Manager and OUI (if not running already).

2. Log into the OUI with your User ID (e.g. SYS).

3. Select **System**.

4. Select **Areas**.

5.  Select **Add** Area and enter a new Area name (e.g., StudioA).

    A maximum of seven characters is recommended. (Seven is the maximum for the Area Alias, described below.)

**Note**    You can't rename or delete "Default Area" although you may define an Area Alias for it.

6.  Add the next Area using the steps above.

## Assigning a User to an Area

If desired, individual users can be assigned to an Area (able to control Destinations only in that one Area).

1.  Select **User**s.

2.  Click on **Select** and select the individual user.

3.  Select the **Area** field and select the desired Area.

If you wish to assign a user to all Areas, select **Default Area**.

## Assigning Engines and Applications to an Area

Once the decision is made to divide the system into Areas, the System Manager is used to assign all engines and applications to a given Area. Assigning engines and applications to Areas affects access to application Log-in. If an application is placed in an Area other the default and the Off-line/Local/All Areas flag is set to Local, that application will only be accessible from OUIs and users configured for the same Area.

This technique is useful in very large systems where different users have administrative rights for specific subsets of the system. If such is not required, the recommended practice is to assign all engines and applications to the default Area.

## Assigning Applications for New SCBs

If you are adding new SCBs, you will need to create new instances of these applications to run on the new hardware.

1.  Go to **System Manager > Applications**.

2.  Assign each CP Server application to the desired Area.

3.  Set the Area access restrictions for the application:

    • For unrestricted log-in access set the Off-line / Local / All Areas flag to **All Areas**.

    • For restricted access set the flag to **Local**.

**4.** Select **Modify**.

**Note**    The Router Control application is not assigned to an Area using the System Manager. This assignment is made within the Router Control application itself, as described below under *Assigning a Router Controller to an Area on page 93.*

## Assigning an SCB to an Area

In multi-Area systems, the System Manager is used to assign all SCBs to the default Area. If you are adding new SCBs, you will need to add these "engines," their IP addresses, and their applications.

**1.** Go to **System Manager > Engines**.

**2.** Click **Select** and choose an engine from the list.

**3.** Click **Area** and select an Area from the list.

**4.** Set the Availability flag:

- For unrestricted log-in access set the Off-line / Local / All Areas flag to **All Areas**.

- For restricted access set the flag to **Local**.

**5.** Select **Modify**.

## Assigning a Router Controller to an Area

Using the Router Control application, each router is assigned to one Area. For example, "Router A" could be assigned to "StudioA."

**Note**    Do not assign more than one Router Control application (or redundant Router Control pair, i.e., more than one router) to the same Area.

**Note**    The Area of the Router Control application can only be changed from the application. Changing the Area of the engine on which the Router Control application is running or changing the Area of this application from the System Manager does not get reflected on the Router Control application even if System Manager, Sharer, or the SCB (engine on which the Router Control application is running) is rebooted.

### Open the Router Control application (if not open already):

**1.** Launch the OUI and select **Start**.

**2.** Enter your User ID (e.g. SYS).

**3.** Press **Enter** to close the "Welcome to Encore" window.

**4.** Select the first Router Control application.

**Configure the Router Control Application:**

1.  Select **Config**.

2.  Select **Area** and answer **Yes** to the warning message.

3.  Select the desired Area (e.g. "StudioA").

4.  If you want the name of the Area (not just the number) to be visible to the CP Server application, use the Change Area Alias button to enter the name.

5.  Select **Modify** and answer **Yes** to warning message. If this is a redundant SCB installation, also answer **Yes** to update the mirror with changes.

6.  Select **Commit Changes**.

7.  Repeat this process for each Router Control application.

## Configuring Control Panels in Areas

See *Control Panels and Areas* on page 236 for specific instructions.

# Changing Area Assignments

*   To assign a Router Controller to a different Area, use the Router Control application as described above (*Assigning a Router Controller to an Area* on page 93).

*   To give a control panel access to a different Area, use the Control Panel Server application as described above (*Configuring Control Panels for Specific Area(s)* on page 237).

**Note**      It isn't necessary to return to the System Manager application to modify the Area assignment of the SCB or Router Control application.

# Router Configuration

## Overview

### Encore Router Control Application

The Encore Router Control application directs the activities of the router matrix or matrices it has been configured to control. The Router Control application runs on an Encore System Controller, and can control up to 32 routing matrices via Ethernet. Serial control ports can also be used, but exhibit greater latency and lesser throughput.

The Router Control application maintains a database containing a list of Sources (and the Levels that each Source provides), and a list of Destinations (and the Levels that each Destination accepts) for the routing matrices it controls. Routes can then be made via the Router Control application's own interface, or by other applications instructing the Router Control application to make a Take (including automation systems). The Router Control application communicates with the relevant router matrices and instructs them to switch the appropriate cross-points. Each Router Control application also maintains a status map (which Sources are connected to which Destinations), creating a common view of the statuses of the routing matrices connected to it.

A large facility may have several separate routing matrices, each used for different purposes, and each can have its own Router Control application running on an Encore System Controller. If multiple Encore System Controllers exist in a large Encore system, each will be placed in its own Area and run its own Router Controller. These Router Controllers are isolated, and don't know about others on the network. The databases for the router matrices are combined by the Encore Control System into one large database, however.

The only exception to there being only one Router Controller in each Area is when mirrored redundancy is present. In a mirrored routing scenario two Router Controllers located in the same Area perform the same task. All actions/requests are sent to each Router Controller, but only one responds.

This mirroring of Router Controllers is generally hidden from the users and the routing client applications.

The Router Control application provides the highest level of routing control in an Encore system, and offers access to the database that defines the routing configuration. For this reason, this application is not intended for use by operators. The separate Local Router Panel application allows operators to change crosspoints, but does not allow configuration changes. While the Router Control application can also be used to change crosspoints (via the Route Screen), its main function is to configure and maintain the routing system.

# Router Configuration Background Information

Before a Router Control application can control a routing matrix, it needs to know what hardware is present, and also needs to know the manner in which that hardware is to be controlled. For example, some routing matrix frame hardware supports both video and audio signals. It does not make sense to route audio signal Sources to video Destinations, so this should not be allowed. It is also convenient to normally switch multiple signals simultaneously (video and key, for example), but also allow switching them independently from one another on occasion (split keys). And in some situations there may be a need to always switch multiple signals at the same time without exception (for example, red, green, and blue video). All these variations, and many others, are possible by properly configuring your Encore system.

Besides directing the activities of the router matrix hardware, the Encore Router Control application is also used to configure the system. This configuration process uses a somewhat hierarchal approach. For example, Physical Matrix configuration is used to identify the hardware present, and Logical Matrix configuration specifies how that hardware will be controlled. The configuration hierarchy has many interconnections that, when combined together, allow great flexibility in routing system functionality. The major components of this configuration hierarchy are described below.

## Area

An Area is the highest organizational entity of an Encore system that generally defines a geographical or functional portion of a facility. Only one Router Controller (and it's mirror, if present) is allowed in each Area. Many facilities operate with only one Area. Areas are defined using the System Manager application.

In systems with only one routing Area, the Default Area should be used. In systems using multiple Areas, or systems planned to grow from a single Area to multiple Areas in the future, the Default Area should NOT be used for routing. This is because when a new Router Controller is added, it uses the Default Area until configured otherwise. Not using the Default Area

prevents conflicts from occurring (i.e. two Router Controllers in the same Area) when a new Router Controller is added. When adding to multi-Area systems, use the System Manager to create and name a new Area for each Router Controller, then log on to the Router Control application and change the routing area from Default to the new Area, using the main configuration screen.

## Levels

Levels are used to identify different signal type (signal format, i.e. digital video, analog audio), and can also segregate functional subsets of a particular signal type for operator control. For example, a single Level may be created called HDVid that pertains to crosspoints that can pass HD video. In another example, two Levels entitled AnAudL and AnAudR could be created that pertain to left and right analog audio signals of the same format. This latter example permits the operator to do breakaway audio Takes and, for example, select different audio for left and right channels using a control panel. Levels essentially organize together signal types for functional purposes and allows operators control of these signals. Levels span an entire facility, for consistency, and are recognized by all Encore Areas on the network.

## Physical Matrix Configuration

Physical Matrix configuration defines the physical crosspoints available, the signal type involved, organizing them into Crosspoint Groups, and specifies the mechanism used to control them (communications protocols). A Physical Matrix has a characteristic of being able to physically route any input (Source) to any output (Destination), although depending on the configuration some paths may be disallowed.

### Crosspoint Groups

A crosspoint group is a defined input/output block of crosspoints. This group can be made up of crosspoints within a single frame or on multiple frames, though typically a single frame is used.

### Segments

A crosspoint group can be subdivided into Segments to control the interconnections that will be possible. For example, a specific Analog Video routing frame may be represented as a crosspoint group that is divided into three segments, one each for red, green, and blue signals. These segments can be defined to disallow connecting a red Source to a green Destination. Segments are mapped to Logical Matrix Elements.

Two different Segment types are available: blocked and interleaved. Blocked segments configure the same signal type into a block of consecutive inputs and outputs. Blocked segments are often used to establish a block of HD signals and a block of SD signals within a crosspoint group. Interleaved segments simplify configuration of repetitive, linked signal

types by alternating the input connectors. For example, red, green and blue signals can be easily configured using an interleaved factor of three.

## Logical Matrix Configuration

A Logical Matrix determines the manner in which the various components of a Physical Matrix are controlled. It organizes the switching capabilities of a routing matrix in a manner to suit the unique requirements of the facility. It correlates Crosspoint Groups, Segments, and Levels.

### Elements

A Logical Matrix can be subdivided into Elements, and these Elements are mapped to specific Physical Matrix Segments. These elements are also mapped to facility wide Levels, which brings that control mechanism out to the user.

## Sources and Destinations

Sources and Destinations are the inputs and outputs of a routing system. A Source or Destination can be defined to be an individual electronic in or out, or it can contain multiple signals on multiple Levels. For example, a Source may consist of separate Digital Video and Key signals, which typically switch together, but can be separately switched if necessary. The Sources and Destinations define the physical input and output connectors involved, and associates them with Levels.

## Rules

Rules define global, Destination-oriented attributes, that include the ability to disable the routing of specific Sources to specific Destinations. These rules can be applied to a single Destination or to several Destinations. Additionally, Source and Destination exclusions can also be configured via the Panel Server application for specific control panels.

Together, the configuration hierarchy above allows disparate hardware to be controlled consistently and allows extensive flexibility in designing a routing system to accomplish exactly what is needed at your facility.

# Router Configuration Process

Figure 65 illustrates the overall sequence in which a new router configuration is created after Encore is first installed. Subsequent new configurations can employ some shortcuts, and advanced users can streamline the process even more.

*Figure 65.  Router Configuration Flow Chart*
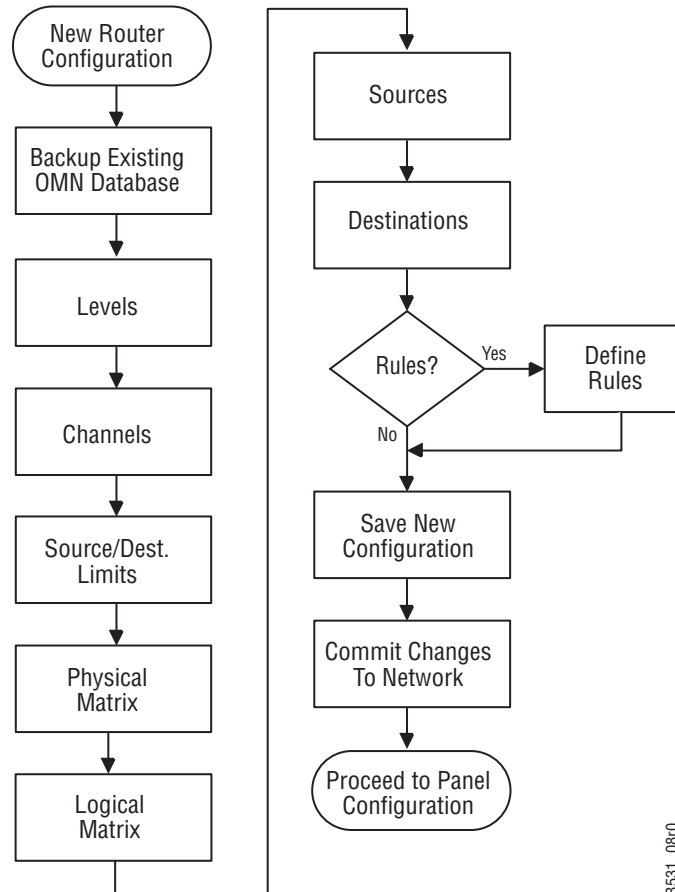


We will discuss the Router Control application functions in the order used for router setup and configuration. For each of those screens we'll also explain the buttons and fields available.

This section assumes that you understand basic OUI functionality. If you need a refresher on the Encore OUI, see *Encore OUI Description* on page 35.

## Network Configuration

This section also assumes your Encore components have already been configured with IP addresses appropriate for your facility, and that basic communications is successful among all the devices involved, as described in *Test Initial System Functionality* on page 66.

For a list of general preparation guidelines, including network configuration, see *Full System Configuration Preparation* on page 86. Specific information about network topologies and configuration, especially for large installations, is beyond the scope of this manual. Contact your facility's network administrator for guidance.

## Backup OMN Database

It is a good practice to always backup the OMN database before making any changes to an Encore configuration. That way, should there be any problems you can easily restore the system to its earlier condition. The OMM database consists of a collection of directories located on the Sharer PC. This database is for the entire Encore system.

1.  Make a copy of the entire OMN folder on the C: drive root directory of the Sharer PC, giving it a new folder name. Copy that renamed folder onto removable media, label it, and store it in a safe location.

2.  The folder can be renamed to identify its version or date, but before it can be used by Encore the folder must have its original OMN name and be placed back at the C: drive root directory of the Sharer PC.

# Router Controller Main Screen

The Router Controller is a remote application, launched by logging into the Encore OUI, clicking on a blank button, and selecting that application from the list displayed.

The Router Controller Main Screen shows the name of the application (Router) and below it, the Area that the Router Control application services (Figure 66). Use the buttons on the Main menu to go to the function you want: **Route**, **Names**, **Config**, or **Options.** Clicking the **Disconnect** button at the bottom of the screen exits the application and makes it available to other users.
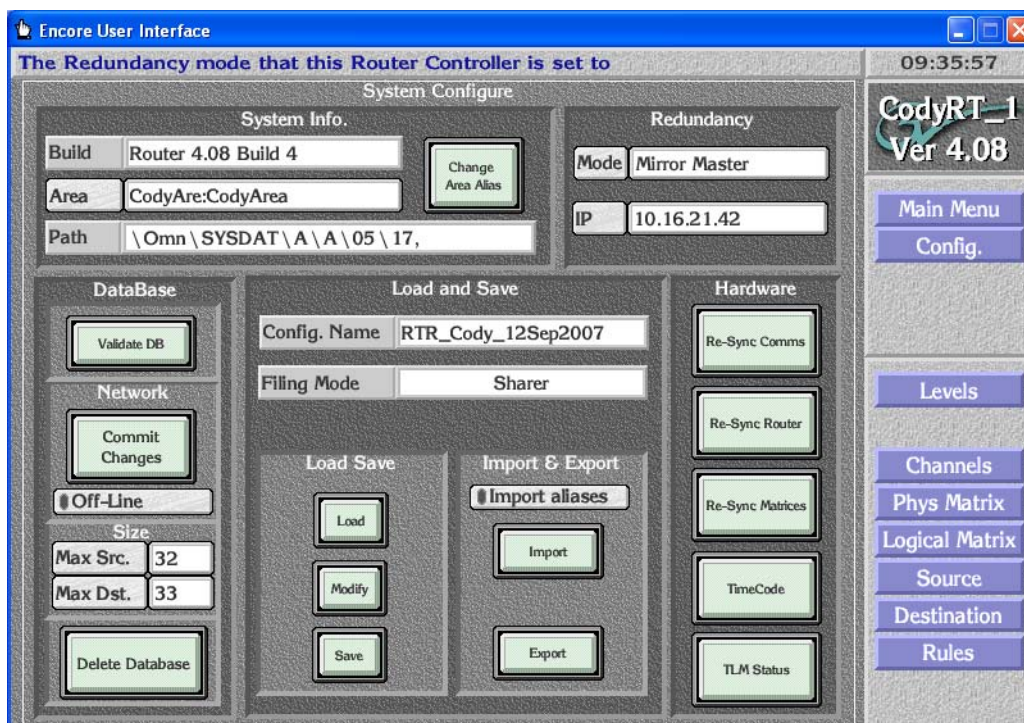
*Figure 66.  Router Controller Main Screen*
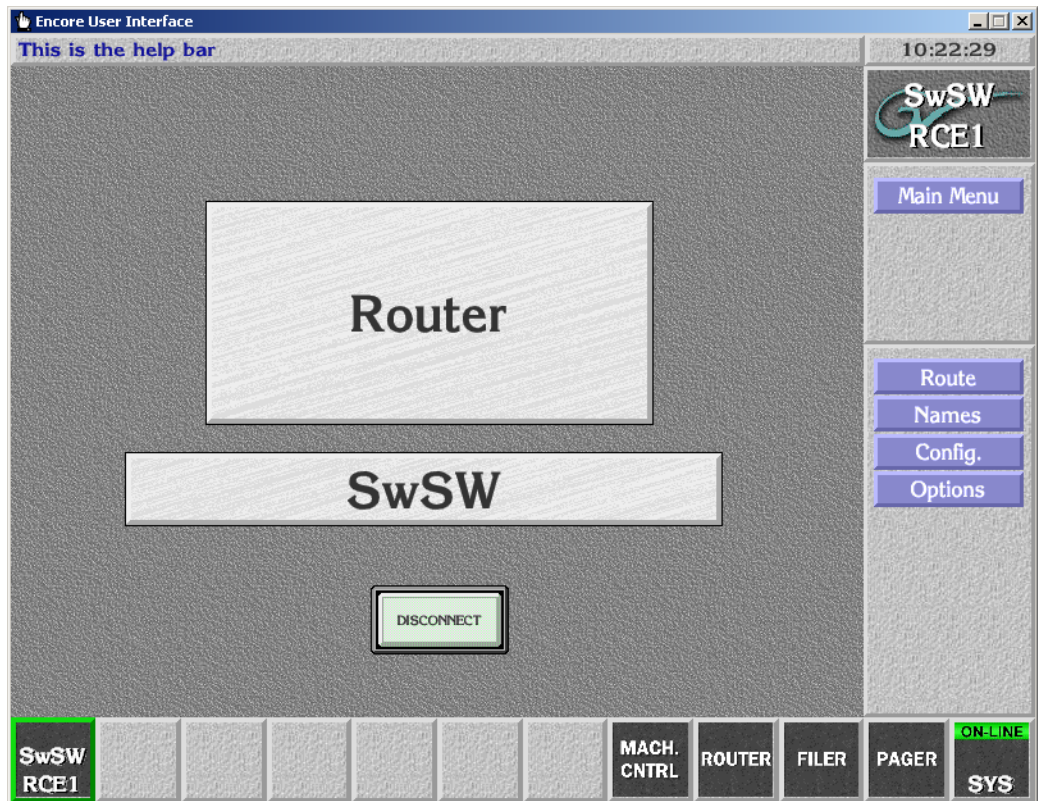


# System Configure Screen Description

Use the System Configure screen ([Figure 67](#)) to review or define router settings for your Encore system. The screen displays current router settings, most of which you can change. It also gives access to all of the configurable options in the Router Control application, either within the System Configure screen itself or by means of other screens accessed by the buttons on the Main menu.

*Figure 67.  System Configure Screen*



| System Info. | Build | Reports the software version of the Router Control application. Cannot be changed by user. |
| | Change Area Alias | Enables you to change the Area's alias (maximum 3 characters), not its name. This alias is used by the **Local Router Panel** and other router clients such as the Panel Server. The actual name of the Area, (also shown on this button), is defined in the System Manager application. |
| | Area | Click this button to change to a different Area. Many facilities will only have one Area, though larger facilities may have several. New Areas are created using System Manager. |
| | Path | Displays the configuration file path for the router database. Cannot be changed by user. If filing mode is Local, the path is on the System Controller. If filing mode is Sharer, the path is on the Sharer PC. |
| Redundancy | Mode | Displays the mirroring mode. Click the button for a list of mirroring options: Disabled, Mirror Master, Mirror Slave, or Asymmetric Slave. |
| | IP | In this field, specify the IP address of the device which will mirror this Router Controller. |

| | | |
|---|---|---|
| **DataBase** | **Validate DB** | This button indicates the current state of the Router database and can be used to regenerate the database. |
| **Network** | **Commit Changes** | Notifies all Encore clients on the network that there have been changes to the database. Clients which need this information will then update their data. Press the **Commit Changes** button after saving changes made to the router database (by clicking the **Modify** button). Note that **Commit Changes** also switches the Router Controller from the off-line to the on-line state. |
| | **Off-Line indicator** | When the indicator is green, the Router Control application is off-line. When off-line, the routing services supported by this application are not available to the system. |
| **Size** | **Max Src.** | Use this field to define the maximum number of Source names you want the router database to contain. |
| **Size** | **Max Dst.** | Use this field to define the maximum number of Destinations names you want the router database to contain. |
| | **Delete Database** | Deletes information only from the System Controller's active memory. This does not affect any files stored on the Server, or any files stored on the System Controller. |
| **Load and Save** | **Config Name** | Reports the file name of the currently loaded configuration. |
| | **Filing Mode** | Displays the mode of the active database — Sharer or Local. In Sharer mode the database has been loaded from the Sharer PC, and this is the normal operating mode. In Local mode the database has been loaded from the locally shared cache on the System Controller. This mode is used if the Sharer is not present during Router Controller start-up. If the Sharer comes on-line later, the mode remains Local. You can load the appropriate config file from the Sharer to return to Sharer mode. Alternatively, if you know the local database has the correct information while in Local mode, you can click the **Modify** button. Doing so writes the local configuration to the Sharer and switches the mode to Sharer. |

**Load**                      Opens a FilerFax window allowing you to select a router configuration file to load.
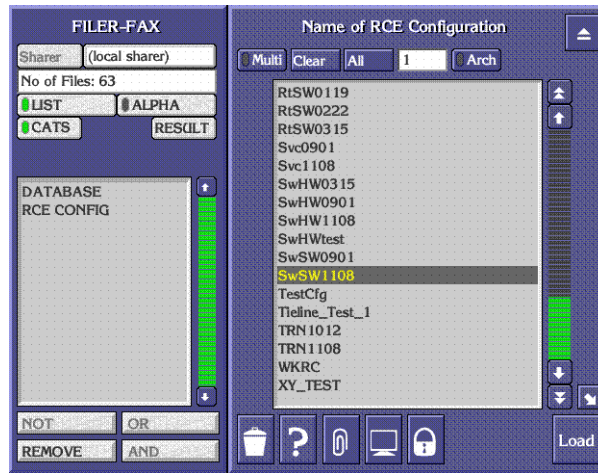


**Modify**                    Saves the router database from the System Controller's memory to the Sharer. You must click this button to save any configuration changes you've made. Clicking this button does not notify Encore clients that there have been changes to the database. This action also switches the **Filing Mode** from Local to Sharer.

**Save**                      Opens a window to name the current router configuration file. Once a name is entered, a FilerFax window opens that issued to save the data to the Sharer PC.
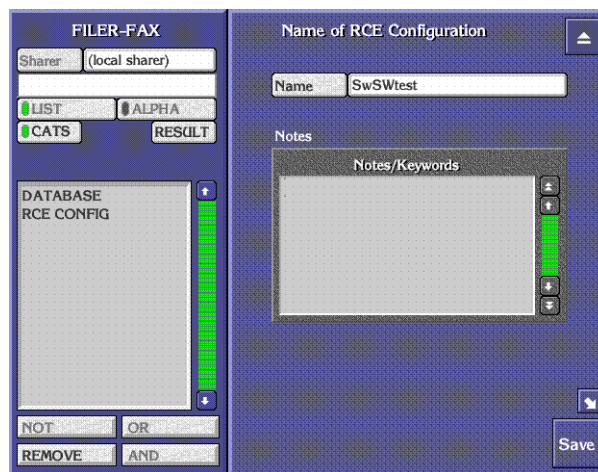


**Import Aliases**            Enables/disables importing Source Aliases from CSV files.

| | | |
|---|---|---|
| | **Import** | Imports a CSV (comma separated values) file from the directory you choose on the drive you specify in the subsequent screens: the floppy disk (fd0) or the primary hard disk (hd0) on the controller or the floppy drive (*IP number*//fd0) or the primary hard disk (*IP number*//hd0) of the workstation running the OUI. Importing a CSV file containing Source and Destination information is an alternative way of quickly configuring the Router Controller. See *Configuration Export and Import* on page 168 for details. |
| | **Export** | Exports the current router database settings as a CSV (comma separated values) file to the target and path you choose when you click the Path button: either to the PC's floppy disk (fd0) or to the PC's primary hard disk (hd0). These exported settings can then be used to configure other Router Controllers. This is also an effective way to back up the router configuration. See *Configuration Export and Import* on page 168 for details. |
| Hardware | **Re-Sync Comms** | Re-initiates all matrix communications. This button must be clicked to apply changes to I/O channel settings and for other communication-related changes. |
| | **Re-Sync Router** | The Router Control application synchronizes itself to the physical state of the router matrices that it is controlling. |
| | **Re-Sync Matrices** | The Router Control application sends the last saved state of the router Crosspoint status map to all of the router matrices that it is controlling. |
| | **TimeCode** | Opens the Timecode Status window which displays time in the form: hours:minutes:seconds:frame. The **VITC Present** indicator lights when VITC is embedded on the reference input. The Encore system automatically detects the incoming reference signal format, and its setting cannot be changed. |
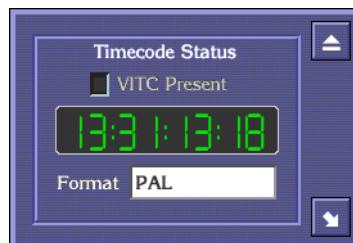
**TLM Status**
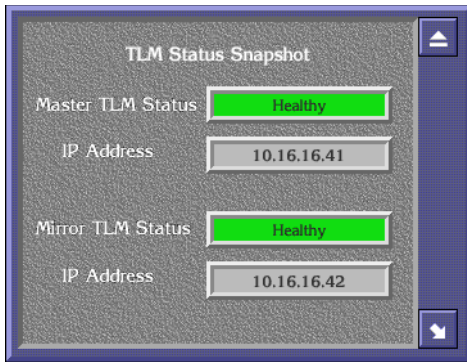
Opens a window that reports the status and IP addresses of Tie-Line Managers at the time the window was opened. The Master/Mirror TLM Status text button reports three conditions:

**Healthy** (green): A TLM is up and running.

**Failed** (red): The RE did recognize the TLM service in the past, however, right now, the TLM is not responding.

**Not Detected** (red): The TLM is not running on the network, or the TLM is in Disabled mode.

If the Router Controller detects failure of a TLM (either Mirror or Master), an unsolicited message appears on the Router Controller OUI to indicate the change in TLM status.

# Creating a New Router Configuration

It is advisable to save any existing Router Configuration as a named file before making configuration changes. This data pertains only to that specific Router Controller, and allows you to easily restore it to its previous state without having to restore the entire OMN database.

If you are configuring a brand new Encore system and used the Dummy Test Config to test the system, as described earlier, you do not need to save that configuration file since it should already exist on your system.

**1.** Click the **Config** button on the Main menu of the Router Control application.

**2.** Click **Save** and enter a descriptive file name for the existing router configuration, then click **Save** again to save a copy of the database file

**3.** When the System Configure screen re-appears, click the **Delete Database** button to purge any existing configuration and click OK to approve the deletion.

This deletes the database from the System Controller's memory, not from the Sharer. (This step can be reversed by clicking **Load** and selecting the database file you just saved.)

**CAUTION**  The next step erases the database saved on) the Sharer.

4. Click the **Modify** button to save a null database to Sharer.

5. Define the maximum number of Sources and Destinations by typing in the **Max Src** and **Max Dst** fields.

   This establishes the number of Source and Destination index numbers that will be used in the configuration. These numbers can be modified after the fact. Increasing the numbers will not affect any previously entered data.

**Note**  Reducing the numbers will remove Source and Destination data outside of the new range you enter.

Because Levels are global, you should create them first. To continue with a new configuration, proceed directly to *Configuring a Level* on page 109.

# Level Screen Description

Levels generally correspond to signal formats, for example, audio, digital video, etc. The name and type of each Level is configured on this screen. Changes made here apply to all routers in all Areas of an Encore system because Levels are global.

Click on the **Level** button to go to the Level Configuration screen (Figure 68).

*Figure 68. Level Configuration Screen*
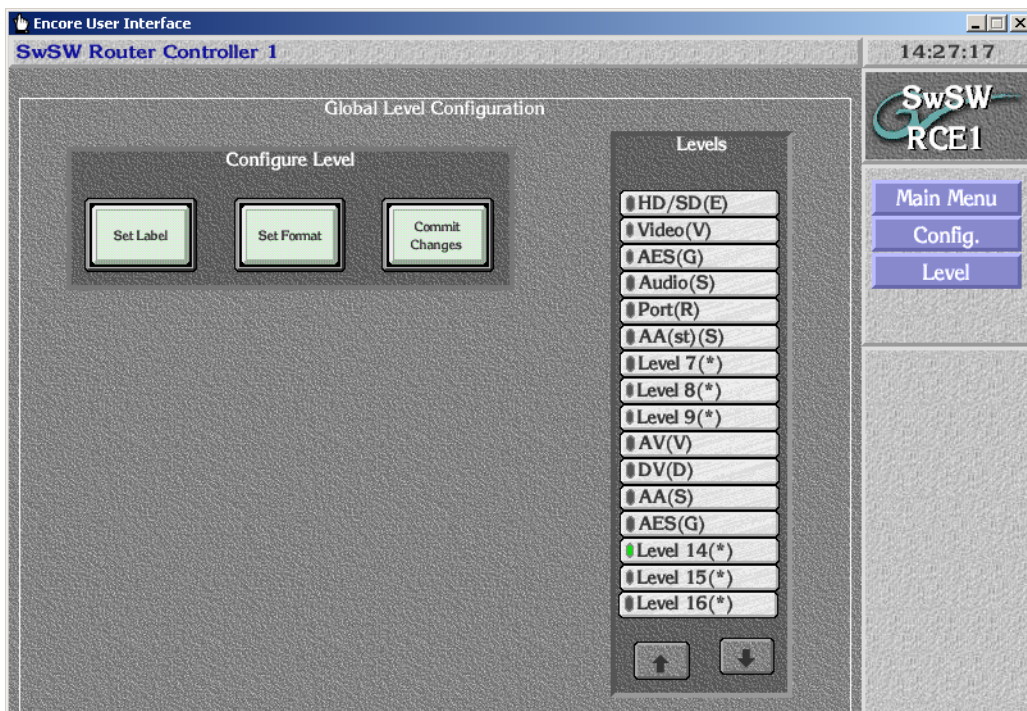


**Config Level**

| | |
|---|---|
| **Set Label** | Allows naming/renaming the selected Level. |
| **Set Format** | Allows specifying the format the selected Level will support. Format is indicated by the letter in parentheses following the Level name, for example the **D** in **SDI(D)** indicates a digital video signal. |
| **Commit Changes** | Saves the changes you've made in the Level Configuration screen to all Router Controllers on the network and across all Areas. This applies to all Levels, not just the one you may have selected. |

**Levels**

| | |
|---|---|
| **(Level names)** | Use these buttons to specify the Level you want to configure. |
| **Up Down Arrows** | Pages up or down one screen of Levels per click. |

The character in parenthesis after the Level name on a button, for example: **SDI (D)**, is intended to help users remember what format that Level supports.

*Table 6.  Level Label Characters and Their Formats*

| Char. | Format | Char. | Format |
|-------|--------|-------|--------|
| * | Any - Any Format | K | Key |
| A | An AudioL - Analog Audio Left Channel | O | Other - Not Specified |
| B | An AudioR - Analog Audio Right Channel | ? | Reserved |
| C | Component - Component Video | R | Data or Serial Data |
| D | Dig Video - Digital Video (SDI/SDV) | S | An Audio St - Analog Audio Stereo |
| E | SDI+Audio | T | Timecode |
| G | Dig Audio - Digital Audio or AES | V | Composite - Composite Video |

## Configuring a Level

The following procedures continue from *Creating a New Router Configuration* on page 106, but can be used to configure Levels at any time.

**6.** Select a Level by clicking the appropriate indicator button in the **Levels** section of the screen.

The indicator will turn green to indicate that Level is selected.

**7.** Click the **Set Label** button in the **Config Level** section of the screen, and type a name for the Level using the alpha/numeric keyboard that appears on the screen.

*Figure 69.  Level Label Keyboard*



**8.** Click the **Set Format** button in the **Config Level** section of the screen, and select a type for the Level from the list window that appears on the screen.

*Figure 70. Select Level Format Window*
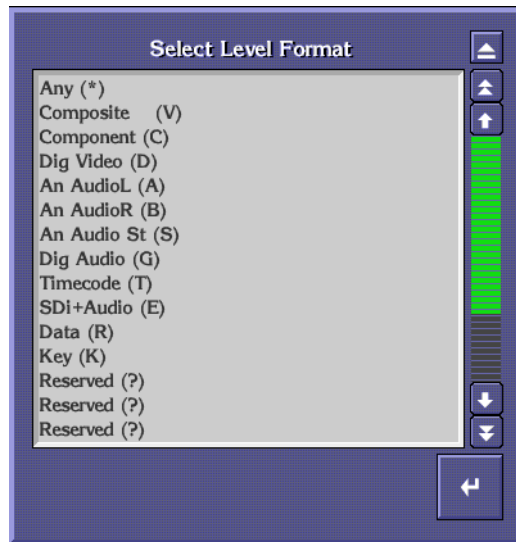


9. Click the **Commit Changes** button to apply your changes to the network.

**Note**     Any changes made on the Levels Configuration Screen are implemented system-wide, including across all Areas, and affect all users.

10. Click the **Config** or **Main Menu** button to leave the Level Config screen.

To continue with a new configuration, proceed directly to I/O Channel Configuration. *Configuring a Communication Channel* on page 113, or read the intervening explanatory material first.

# Channels Screen Description

Before you can configure your router, you must define and select a communication channel by which the router will communicate with each matrix to be controlled. To do so, make your settings using the I/O Channel Configuration screen (Figure 71).

**Note**     If you change an existing I/O Channel configuration, you must click the **Re-Sync Comms** button to activate the changes.

*Figure 71. I/O Channel Configuration Screen When a Protocol Such as CPL is Specified*
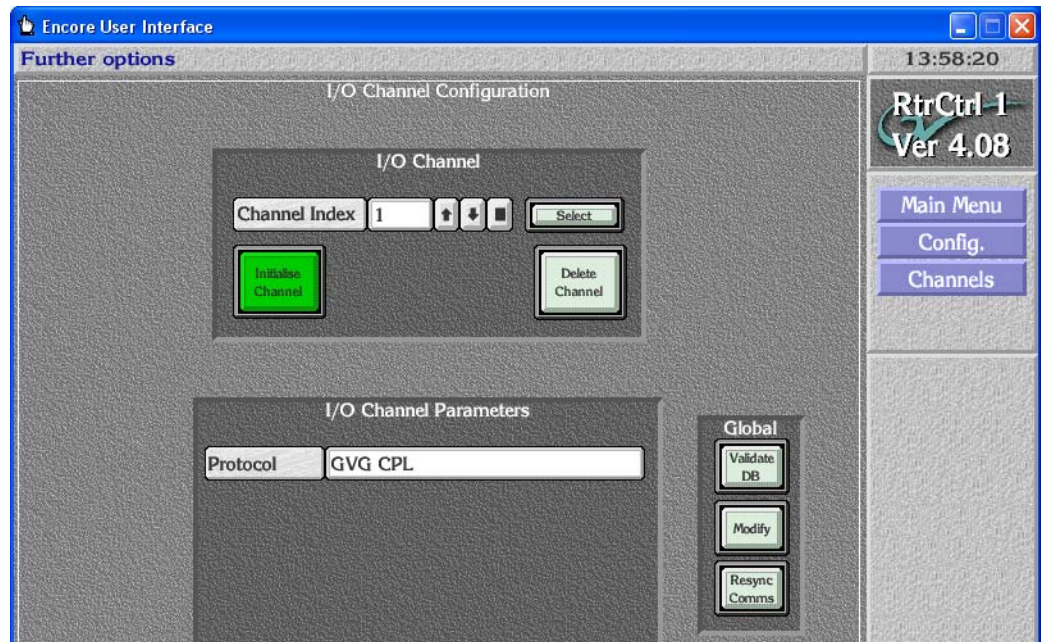


*Figure 72. I/O Channel Configuration Screen When a Serial Protocol is Specified*
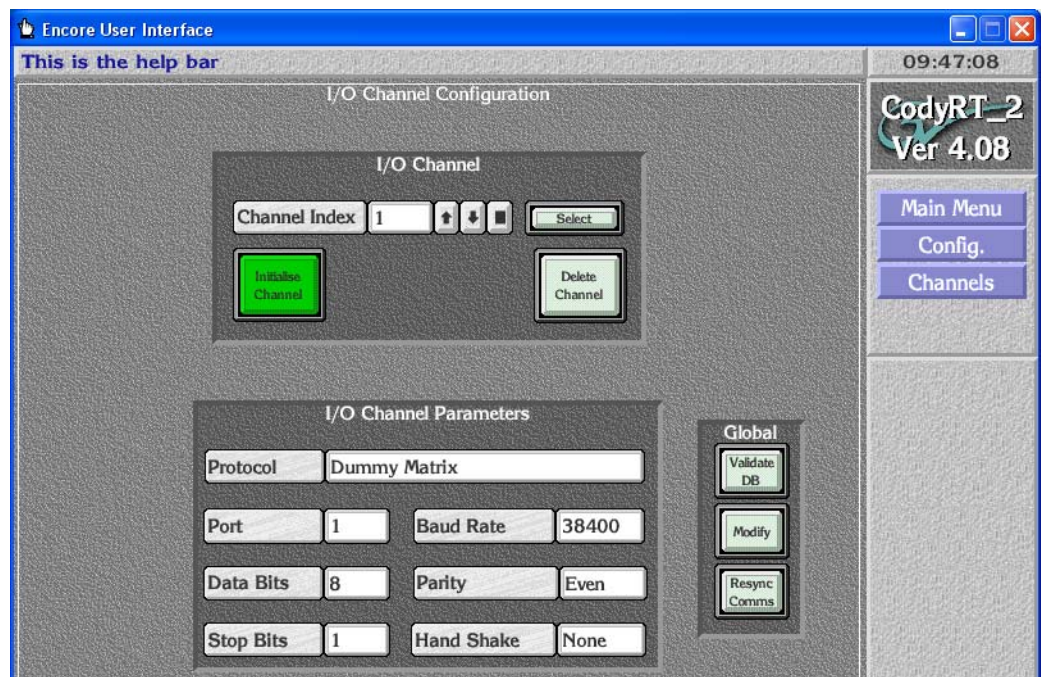


| I/O Channel | **Channel Index** | Displays the communication channel to be specified for the matrix currently being configured. |
|---|---|---|
| | **Up Down Arrows** | Increments the list up or down one entry per click and selects that entry. |

**Reset**        Selects the first (top-most) entry in the list.

**Select**        Enables a communication channel to be selected from a list window displaying both channel index numbers and their selected protocols.

**Initialize Channel**    Initializes the communications channel displayed in the **Channel Index** field. To finalize the settings, this button must be clicked after the channel and channel parameters are set.

**Delete Channel**    Resets the channel displayed in the **Channel Index** field, removing its associated protocol and channel parameters and freeing it to be reconfigured and reused. This button has global and permanent implications, at least until the system is reconfigured.

**I/O Channel Parameters**

**Protocol**        Allows a protocol (See Figure 73.) to be selected for a particular communication channel for specific devices. Your choice here will also fill in the default I/O Channel Parameters for that protocol and dictate which buttons you see beneath it. For example, selecting the **GVG CPL** protocol (used for Ethernet communications with Grass Valley matrices) will display only an IP Address button in the I/O Channel Parameters group.

*Figure 73. Select Router Protocol List*
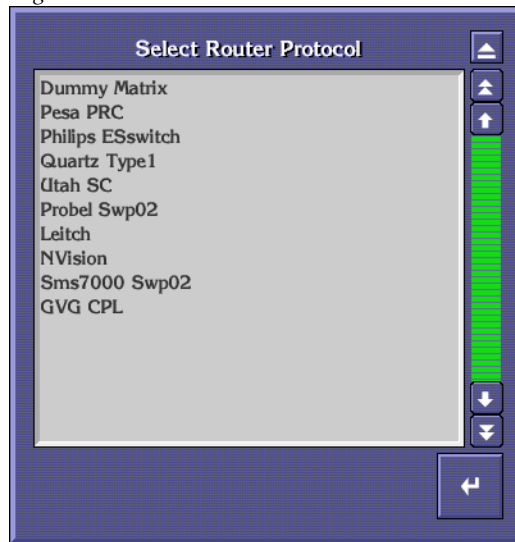


**Port**        Allows one of eight serial ports on the Device Control Engine to be specified for a particular communication channel. This button is only visible for serial protocols.

**Baud Rate**    Specifies the baud rate for a particular channel. Clicking on the button allows the value to be changed.

| | | |
|---|---|---|
| | **Data Bits** | Specifies the number of data bits for the selected channel. Clicking on the button allows the value to be changed. This button is only visible for serial protocols. |
| | **Parity** | Specifies the parity for the selected channel. Clicking on the button allows the value to be changed. This button is only visible for serial protocols. |
| | **Stop Bits** | Specifies the number of stop bits for the selected channel. Clicking on the button allows the value to be changed. This button is only visible for serial protocols. |
| | **Hand Shake** | Specifies the handshake type for the selected channel. Clicking on the button allows the type to be changed. This button is only visible for serial protocols. |
| | **Host IP** | Appears only if you choose the GVG CPL protocol and then replaces all but the Protocol button. By default, displays the IP address of the system controller's designated primary Ethernet slot, EN1. If your configuration warrants it, type the IP number for the secondary Ethernet slot, EN2. |
| Global | **Validate DB** | This button indicates the current state of the Router database and can be used to regenerate the database. |
| | **Modify** | Saves the router database from the System Controller's memory to the Sharer. (Same function as that button on the Config Screen.) |
| | **Resync Comms** | Re-initiates all matrix communications. (Same function as that button on the Config Screen.) |

## Configuring a Communication Channel

The following procedures continue from *Configuring a Level* , but can be used to configure a communication channel at any time.

11. Click the **Channels** button on the Main menu of the System Configure screen to open the I/O Channel Configuration screen.

12. Click the **Select** button and choose the communication channel that you want to configure from the list window that appears on the screen. Or use the other controls here to specify the communication channel.

13. Click the **Protocol** button and select the desired protocol from the list window that appears on the screen. The **Data Bits**, **Stop Bits**, **Baud Rate**, **Parity** and **Hand Shake** parameters are automatically set to comply with the selected protocol. These values should be confirmed with the router manufacturer's serial communication guidelines.

**Note**    Use GVG CPL protocol for Ethernet interface to Grass Valley Group matrices.
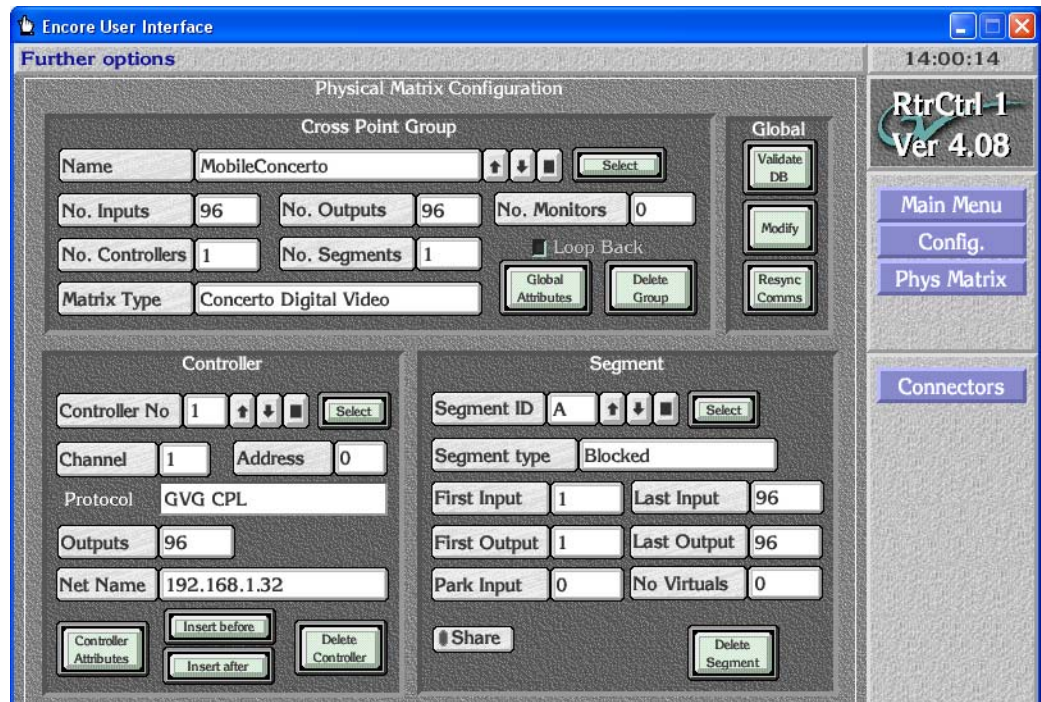
**14.** If configuring a serial communications channel do the following"

    **a.** Click the **Port** button to specify a serial port on the Router Controller. All router matrices using the channel defined in Step 12 will communicate with the Router Controller via this port.

    **b.** If necessary, change the **Data Bits**, **Stop Bits**, **Baud Rate**, **Parity** or **Hand Shake** parameters by clicking the relevant buttons and choosing from the list which appears.

**15.** Click the **Initialize Channel** button to finalize all the information associated with the specified communication channel.

**16.** Click the **Modify** button to save all of your settings.

**17.** If you change an existing I/O Channel configuration, you must now click the **Re-Sync Comms** button to apply your changes throughout the network.

To continue with a new configuration, proceed directly to *Configuring a Physical Matrix* on page 124, or read the intervening explanatory material first.

# Physical Matrix Screen Description

The Physical Matrix Configuration screen (Figure 74) is used to define the configuration parameters of the controlled matrices. Since a communication channel must be specified before you can control a matrix, the communication channels should be configured first (see *Configuring a Communication Channel* on page 113).

*Figure 74. Physical Matrix Configuration Screen*



| Cross Point Group | Name | Displays the name of the selected Crosspoint Group. Also allows a Crosspoint Group to be selected, named, or renamed. See *Crosspoint Groups* on page 119 for a definition and explanation of Crosspoint Groups. |
|---|---|---|

**No. Inputs**      Allows the number of inputs to be defined for a particular Crosspoint Group.

**No. Outputs**      Allows the number of outputs to be defined for a particular Crosspoint Group.

**Loop Back indicator**      Indicates whether loop back functionality is enabled. Once enabled, no information is sent to the matrix. This allows the simulation of system operation without having a physical matrix connected. GVG CPL supports this mode. The Dummy Matrix protocol only supports Loop Back.

**No. Controllers**      Allows the number of controllers to be defined for a particular Crosspoint Group. Limit is 32.

**No. Segments**      Allows the number of Segments to be defined for a particular Crosspoint Group. Limit is eight.

**Matrix Type** Allows the type of matrix to be chosen from a list and displayed for a particular Crosspoint Group.

<div align="center">

### Matrix Type

Generic Matrix
NP Matrix
Trinix Digital Video
APEX Audio
APEX Audio (Mono)
Concerto Digital Video
Concerto Analog Video
Concerto Audio (Stereo)
Concerto Audio (Mono)
Concerto Port Router
Concerto Timecode
Acappella Digital Video
Acappella Analog Video
Acappella Digital Audio
Acappella Analog Audio

</div>

 Note that this setting is required only when using Grass Valley Group's CPL protocol.

**Global Attributes** Retrieves global attributes for the first controller in the Crosspoint Group. It is assumed that all others have the same attributes.

**Delete Group** Resets the Crosspoint Group displayed in the (Crosspoint) **Name** field, removing its associated settings (e.g. controller and Segment) and freeing it to be reconfigured and reused.

**No. Monitors** Allows the maximum number of monitors to be defined for a particular Crosspoint Group.

**Controller No.** Displays the ID number of the selected controller for the Crosspoint Group displayed in the (Crosspoint) **Name** field. (Large Crosspoint Groups may use multiple controllers.)

Controller

**Channel** Allows a communication channel to be chosen by name from a list of those previously defined in the I/O Channel Configuration screen. The channel selected here displays the protocol it uses in the **Protocol** field of this screen.

**Address** This field is device dependent and therefore only appropriate for certain protocols. In those cases it allows the address for the specified controller to be defined.

**Protocol** Displays the protocol associated with the selected channel. Cannot be edited here; must be changed in the Channels Configuration screen.

**Outputs**  Allows entry of the number of outputs for the selected controller.

[● Hard Locking]  Toggles hard locking on/off. Hard locking locks crosspoints on a matrix. This button appears and this feature is available only if the protocol specified for the selected channel supports Hardware Lock. Hardware Lock is distinct from Grass Valley Group's hardware locking (the same client which locked the output must unlock it).

**Net Name**  Displays the IP address of the matrix to be controlled by the selected channel. This is pertinent and can be edited only if a channel uses a protocol (such as GVG CPL) that uses a network interface for control.

**Controller Attributes**  If the controller selected in the **Controller No** field is a Concerto matrix, this button opens the Attribute Configuration screen where you can specify, modify, or view settings for the unit's board slots. Every populated slot must be correctly specified using the drop down menu which appears when you click in a slot field.

| Attribute Configuration | |
|---|---|
| Crosspoint | Controller 1 |
| Matrix | Washington SD |
| **Attribute Parameters** | |
| Board Slot 1 | Disabled |
| Board Slot 2 | Disabled |
| Board Slot 3 | Disabled |
| Board Slot 4 | Disabled |

| | | |
|---|---|---|
| | **Insert before** | Allows a newly defined controller to be inserted before the one specified in the subsequent screen. Use the insert and delete buttons with caution; results have global implications. |
| | | Note: The order of controllers determines which subset of outputs are controlled by a particular controller. For example, if there are 128 outputs in a Crosspoint Group, and there are four controllers, and there are 32 outputs per controller, then<br>Controller 1 controls outputs 1-32<br>Controller 2 controls outputs 33-64<br>Controller 3 controls outputs 65-96<br>Controller 4 controls outputs 97-128. |
| | **Insert after** | Allows a newly defined controller to be inserted after the one specified in the subsequent screen. Use the insert and delete buttons with caution; results have global implications. |
| | **Delete Controller** | Removes the specified controller from this configuration. Use the delete and insert buttons with caution; results have global implications. |
| Segment | **Segment ID** | Displays the ID number for the chosen Segment. Choose a specific Segment using the buttons to the right of the field. See *Segment* on page 122 for a definition and explanation of Segments. |
| | **Segment type** | Allows specifying the Segment as blocked or interleaved — the latter with several options for the interleaving increment. |
| | **First Input** | Enter the number corresponding to the first input for the displayed Segment here. This number must be within the specified range, but does not have to be sequential. |
| | **Last Input** | Enter the number corresponding to the last input for the displayed Segment here. This number must be within the specified range, but does not have to be sequential. |
| | **First Output** | Enter the number corresponding to the first output for the displayed Segment here. This number must be within the specified range, but does not have to be sequential. |
| | **Last Output** | Enter the number corresponding to the last output for the displayed Segment here. This number must be within the specified range, but does not have to be sequential. |

| | |
|---|---|
| **Park Input** | Allows specifying the input to route to outputs which are parked by Local Router Panel users. The input is specified as a number. Use the **Names** button on the Main menu and the **Sources** button on the subsequent screen to find the required number if you know only the Source name. Parking is routing outputs to a predefined default — usually "safe" Source such as bars, black, a station logo, or silence for audio. |
| **No. Virtuals** | Disallows virtual crosspoints. Note that "virtual" is different from "logical." |
| **Share** | Toggle to enable/disable sharing the Segment displayed in the **Segment ID** field. When shared, Segments can be used by multiple Logical Matrices. |
| **Delete Segment** | Removes the Segment from the Crosspoint Group displayed in the **Name** field. |
| **Validate DB** | This button indicates the current state of the Router database and can be used to regenerate the database. |
| **Modify** | Saves the router database from the SCB's memory to the Sharer. (Same function as that button on the Config Screen.) |
| **Resync Comms** | Re-initiates all matrix communications. (Same function as that button on the Config Screen.) |

Global

## Crosspoint Groups

A Crosspoint Group is an X-Y array of crosspoints, defined by a number of inputs (X) and outputs (Y). All the crosspoints in the group do not have to be physically present. Each Crosspoint Group includes the settings for its Controller(s) and Segments. Crosspoint Groups must have at least one Segment, but can be partitioned into up to eight Segments. Crosspoint Groups may contain multiple matrix frames and up to 32 Matrix Controllers for large matrices.

Each Matrix Controller in a Crosspoint Group shares the inputs with all controllers within the group, and controls a number of the outputs. Hence all the Matrix Controllers within the Crosspoint Group have the same number of inputs. Each Matrix Controller adds a number of outputs so the output count for a Crosspoint Group is the sum of the outputs of all Controllers within that Group. The Router Controller uses the physical output number to determine which Matrix Controller to address for a given connect requirement.

> **Note** If a Concerto frame contains a mixed-format board set, a different Crosspoint Group must be defined for each format. The same controller is used for all, but there are controller attributes that relate a specific Crosspoint Group to specific boards in the Concerto frame.

Crosspoint Groups also support interlevel routing for Sources and Destinations within the same Crosspoint Group. The two Levels may either share the same Matrix Segment (if declared as shareable) or may be different Segments within the same Crosspoint Group. In the second case, all additional interlevel crosspoints must physically exist (are populated) in the Crosspoint Group.

## Crosspoint Group Parameters

A Crosspoint Group is configured by defining the X-Y size and then partitioning the group into one or more Segments. Note that each segment is fully configured with all crosspoints whereas a Crosspoint Group may only be partially so. The number of controllers used to control the Crosspoint Group and the number of outputs controlled by each must also be specified.

The parameters for a Crosspoint Group are:

- Name. Must be unique for all Crosspoint Groups within a Router Controller.

- Maximum input connector. All inputs range from 1 to this maximum.

- Maximum output connector. All outputs range from 1 to this maximum.

- Number of Matrix Controllers (default is 1).

- Number of segments (default is 1).

# (Matrix) Controller Parameters

Each Matrix Controller has the following parameters:

- I/O channel index (the channel parameters such as baud rate belong to the channel's configuration).

- Matrix Controller address (range 0 to 255).

- Outputs within the Matrix Controller (Range starts from the sum of outputs for previous Matrix Controllers + 1 and must not exceed the maximum for the Crosspoint Group). If only a single Matrix Controller, this is not configurable and is set to the output size of the Crosspoint Group.

## Configuring Concerto Slots

Concerto slots must be configured before the Encore System can be used. The following procedure assumes that you have an existing Router configuration or are in the process of creating one.

1. Ensure that Concerto modules are in appropriate slot locations and are properly seated.

   **Note**    Concerto modules location guideline: A module must always be in slot 1. (Module slots are numbered from top to bottom.) Modules of the same type must be in adjacent slots. Analog and digital audio modules are treated as if they were the same type of module.

2. Ensure that the Concerto and Router Controller are powered up.

3. Ensure that the Sharer and Router Control applications are running.

4. Launch the Encore OUI if it's not already running.

5. Log in and open the Router Control application.

6. Click the **Config.** button on the Main Menu.

7. Ensure that you've already created a channel, defined at least one Crosspoint Group, and assigned a System Controller to it.

8. Click the **Physical Matrix** button on the Main Menu.

9. When the Physical Matrix Configuration window appears, choose the Crosspoint Group/System Controller combination you want to address.

10. If you are not configuring Digital Video modules, click the **Controller Attributes** button in the bottom left corner of the Physical Matrix Configuration window. (Digital Video modules have no attributes.)

    a. When the Attribute Configuration dialog opens, start at the top and click a board slot, then select the appropriate attribute value for that board from the list.

    b. Press the **Return** icon after you've selected the appropriate value.

    c. Repeat this step until you've configured each of the populated slots.

11. When you've configured all of the populated slots, click the **Eject** button at the top right corner of the Attribute Configuration dialog.

12. Now click the **Config**. button and in order, click the **Modify**, **Commit Changes**, **Re-Sync Comms**, and **Re-Sync Router** buttons to save and broadcast your changes.

Repeat Step 9 through Step 12 for each configured Crosspoint Group.

# Segment

A Segment is a unique sub-set of Matrix crosspoints within a single Crosspoint Group. All crosspoints in a Segment must be of the same signal type and all crosspoints in a Segment must be populated. A Crosspoint Group must have at least one Segment, but can have as many as eight. An input can belong to multiple Segments, but an output can belong to one, and only one, Segment. Encore Segments are similar, but not identical to Grass Valley Group SMS7000 Slices.

The **Segment type** allocation of inputs and output IDs is either as blocked or as interleaved. The blocked **Segment type** uses contiguous connectors within the range allocated to the segment. Interleaved segment types use only every $n$th connector where '*n*' is the interleave factor, and the remaining connectors would typically be assigned to other Segment(s) so that the Elements within a Level use contiguous connectors. An Element is a crosspoint within a Logical Matrix that switches when you do a Take. An Element is mapped to a Segment.

Segments are normally assigned to a single Logical Matrix, however you can configure a Segment as shareable to permit assignments to up to eight Logical Matrices. A shareable Matrix Segment is typically used to randomly allocate input and output connectors to multiple Levels which can be switched using the same crosspoint type (e.g., HD and SD Levels using HD crosspoints).

Each segment has the following parameters:

- Segment identifier (2 characters unique to the Crosspoint Group). Not required if the Crosspoint Group has only a single segment.

- Input connector start and end (constrained by Crosspoint Group max input).

- Output connector start and end (constrained by Crosspoint Group max output).

- Segment type (Blocked or Interleaved).

- Interleave factor for Interleaved segments.

- Flag for unique or multiple attachment to Logical Matrix elements. When multiple attachments are permitted, a number of logical matrix elements may share the crosspoints within this segment.

Segments are uniquely mapped to crosspoints (hence outputs). In other words, a crosspoint (hence output) belongs to one and only segment. The interleave factor for interleaved segments is automatically taken into account when determining crosspoint usage.

# Connectors

Click the **Connectors** button to see a cross reference of Connector Allocations as illustrated in Figure 75.

*Figure 75. Connector Allocation Cross Reference*



> **Note** For multiple Segments, unlike those in Figure 75, the numbers in any given connector-input-output row will not always be the same in each column.

## Cross Reference of Connector Allocations to Segments

| **(Crosspoint Group field)** | Displays the name of the Crosspoint Group selected in the Physical Matrix Configuration screen or chosen from the list accessed by the **Select** button in this screen. |
|---|---|
| **Select** | Allows selection of a Crosspoint Group from the list this button opens. |

## Cross Reference of Connectors

| **(Connector column)** | The physical connector number on the matrix. |
|---|---|
| **(Input column)** | The Segment letter and Segment input number. |
| **(output column)** | The Segment letter and Segment output number. |

**Select Connector**   Allows selection of a connector number by scrolling through a list or specifying a connector number.

**Up Down Arrows**   Pages up or down one page per click.

## Configuring a Physical Matrix

The following procedures continue from *Configuring a Communication Channel* on page 113, but can be used to configure a Physical Matrix at any time.

**Note**   See *Sample Router Configurations* on page 146 for examples of several configurations of Physical and Logical Matrices, Segments, and Elements.

13. Click the **Phys Matrix** button on the System Configure Main menu.

14. Use the **Select** button in the CrossPoint Group section of the screen to choose an undefined Crosspoint Group (~Undef Xpt Group *n*).

15. Click in the **Name** field and type a more meaningful name, for example, Washington SD.

16. Click in the **No. Inputs** field and type the number of inputs.

    This entry is copied into the **Last Input** field in the Segment section of the screen because the default configuration is one Segment in the Crosspoint Group that is the same size as the whole Crosspoint Group.

17. Click the **No. Outputs** field and type the number of outputs.

    This entry is copied into the **Last Output** field in the Segment section of the screen because the default configuration is one Segment in the Crosspoint Group that is the same size as the whole Crosspoint Group.

18. In the **No. Controllers** field, indicate the number of controllers used in this Crosspoint Group.

    The controller limit is 32. An entry for each controller will appear in the Controller Select list window when you click the **Select** button in the Controller section of the screen.

19. In the **No. Segments** field, indicate the number of Segments for this configuration.

    The limit is eight. If you indicate more than one Segment, follow these procedures through Step 29, then proceed to *To Configure Additional Segments* on page 126.

20. If you're using Grass Valley Group's CPL, click the **Matrix Type** button and choose the desired matrix type from the list window which appears. Otherwise you can skip this step.

**21.** In the Controller section of the screen, ensure that you have the appropriate controller selected.

If you specified one controller in the **No. Controllers** field of the Cross Point Group section of the screen, you will have only one controller to choose from. Otherwise the controller list, accessed by clicking the **Select** button in this section, will contain the same number of controllers you specified in the **No. Controllers** field of the Cross Point Group section of the screen.

**22.** Click the **Channel** button to choose the channel you previously defined to communicate with this controller.

Once you choose this channel, the read-only Protocol field will display the protocol associated with it during the channel definition process.

**23.** Click in the **Address** field to type the address you want to use for this controller. If you're configuring a Grass Valley Group product, type 0 (zero), since we do not use this.

This field is protocol dependent, check user documentation for the product you're configuring.

**24.** In the **Outputs** field type the number of outputs for this controller.

**25.** If the **Hardware Lock** button is available (depends on the protocol and matrix), toggle it on or off to enable/disable hardware locking.

See  on page 117 for an explanation of this feature.

**26.** If the channel you're defining uses an ethernet-based protocol (such as GVG CPL) which requires an IP address to enable control of the matrix, type the matrix IP address (recommended) or DNS name in the **Net Name** field.

Otherwise the field is uneditable and indicates
`N/A (Not Applicable)`.

**27.** If you're using a non-digital video Concerto matrix, click the **Controller Attributes** button to open the Attribute Configuration screen, and then confirm or modify attributes for the Concerto's board slots as needed.

**28.** If you need to add a controller in a specific order in the controller list, use the **Insert before** or **Insert after** buttons to add the new controller before or after the one displayed in the **Controller No** field of the Controller section of this window.

**Note** To see the existing list and order of controllers, click the **Select** button in the Controller section of the screen to see the Controller Select list window.

**29.** Change any settings necessary in the Segment section of the screen.

In the Segment section of the Physical Matrix Configuration screen some of the settings are inherited from those you made in the Cross

Point Group section of the screen. See the button descriptions for the functions of these buttons.

If you specified more than one Segment in the **No. Segments** field, follow the steps in *To Configure Additional Segments*, before returning to Step 30.

**30.** Click the **Config.** button in the Main menu to return to the System Configure screen.

**31.** Click the **Re-Sync Comms** button in the Hardware section of the screen to create the data structures you've defined during this procedure.

**32.** While you're here, and after you've completed Step 31, click the **Modify** button to save your growing configuration back to the sharer.

### To Configure Additional Segments

If you've specified more than one Segment, follow these steps after creating and configuring the first one.

**a.** In the **Segment** section of the Physical Matrix Configuration screen, use one of the **Segment ID** button controls to select the next Segment you want to configure.

**b.** Type the appropriate input and output ranges for the selected Segment in the **First Input**, **Last Input**, **First Output**, and **Last Output** fields.

**c.** Change any other settings as required in the Segment section.

**d.** Repeat Step a and Step c for all other Segments you specified.

**e.** Go back to Step 30 to complete this portion of the configuration.

# Logical Matrix Configuration Screen Description

The Logical Matrix Configuration screen (Figure 76) is used to define the way physical matrices are controlled, by creating a Logical Matrix model of that control mechanism.

*Figure 76.  Logical Matrix Configuration Screen*
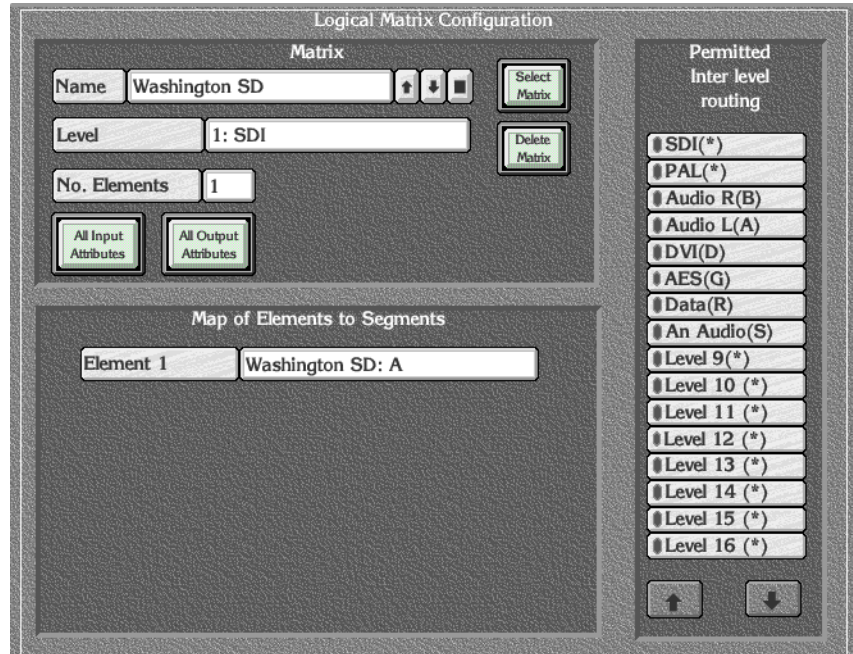


| Matrix | Name | Displays the name of the selected Logical matrix. Also allows naming or renaming the selected matrix. |
|---|---|---|
| | Up Down Arrows | Increments the list of Logical matrices up or down one entry per click and selects that entry. |
| | Reset | Selects the first entry in the list of Logical matrices. |
| | Select Matrix | Allows a logical matrix to be chosen from the Select Logical Matrix list. |
| | Level | Allows selection of a Level from the Select Level for Matrix list. |
| | Delete Matrix | Deletes the selected matrix. |
| | No. Elements | Displays the number of elements for the selected logical matrix. |
| | All Input Attributes | Retrieves and displays Input Attributes for the selected logical matrix. |

| **All Output Attributes** | Retrieves and displays Output Attributes for the selected logical matrix. |
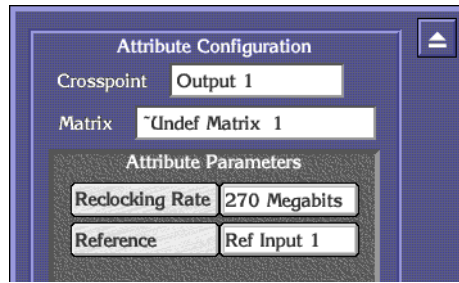


### Map of Elements to Segments

| **Element n** | Allows choosing segment for the associated element in this Logical matrix. |

### Permitted Inter level routing

| **Level n** | Toggles Level(s) allowed for the selected Logical Matrix. |
| **Up Down Arrows** | Pages up or down one screen of Levels, if applicable, per click. |

## Logical Matrix Parameters
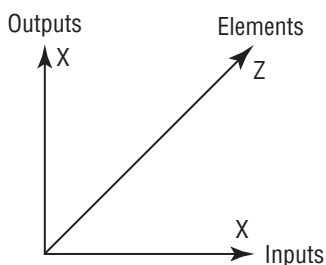


Every Physical Matrix must be assigned to at least one Logical Matrix, but can be assigned to more. A Logical Matrix is a software-defined array of crosspoints. The crosspoints need not be contiguous. Signals of the same type can be scattered through the Physical Matrix (because Inputs and Outputs are assigned to a Logical Matrix on a one–by–one basis). Generally, Logical Matrices are established to handle a specific signal group. Outputs assigned to a Logical Matrix can ONLY directly access Inputs assigned to that same Logical Matrix, but they can use tie-lines to access inputs assigned to another Logical Matrix. If the Logical Matrices are within the same Crosspoint Group and the necessary crosspoint hardware is in place, tie-lines are not required. A Logical Matrix can consist of multiple Elements (default is a single Element). Each Element is attached to a Segment within a Crosspoint Group.

*Figure 77. Sample Relationship Between Logical Matrices, Levels, Elements, and Segments.*
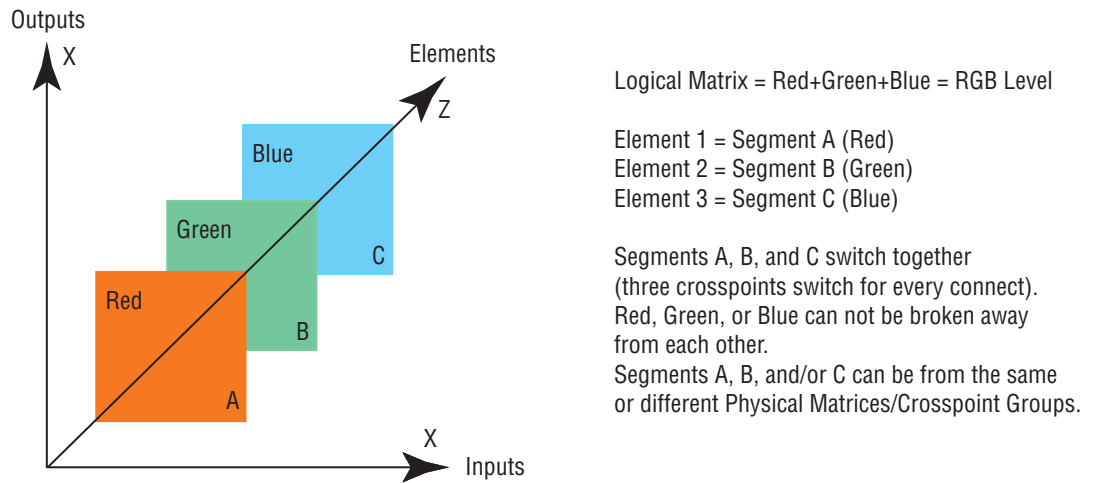


The parameters for a Logical Matrix are:

- Name. Must be unique for all Logical Matrices within a Router Controller.

- Level for the Logical Matrix (single Level only).

- Other Levels which may be used for interlevel routing within the same Crosspoint Group. Default is none.

- Number of elements for the Level (default is one).

The parameters for each Element are:

- Link to a segment of a Crosspoint Group. For second and subsequent elements the quantity of inputs and outputs in the Segments must equal those for the Segment used in the first Element.

The link of a Logical Matrix element to a Segment must be unique (i.e., there is one and only one Element attached to a Segment) unless the Segment is flagged to support multiple Logical Matrices.

Sources and Destinations are configured with each valid Level attached to a Logical Matrix and a connector within the physical range for that Logical Matrix. The routable Level for the Source or Destination must match with the Level configured for the Logical Matrix. Where the Logical Matrix supports multiple Elements, only the first Element is manually configured, all other Elements are automatically assigned according to the Segment's configuration.

## Configuring a Logical Matrix

The following procedures continue from , but can be used to configure a Logical Matrix at any time.

**Note**    See *Sample Router Configurations* on page 146 for examples of several configurations of Physical and Logical Matrices, Segments, and Elements.

**33.** Click the **Logical Matrix** button on the System Configure Main menu.

**34.** Use the **Select** button in the Matrix section of the screen to choose an undefined Logical Matrix (~Undef Matrix n).

**35.** Click in the **Name** field and type a more meaningful name, for example, Washington SD.

**36.** Click the **Level** button to choose the Level to which you want this Logical Matrix assigned.

**37.** Specify the number of Elements in this matrix by typing the appropriate number in the **No. Elements** field.

This will generate a corresponding number of **Element *n*** buttons in the Map of Elements to Segments section of the screen.

**38.** Click each **Element *n*** button and choose the Segment to which you want it mapped.

**39.** If you want Inter Level routing, click the desired Level(s) in the Permitted Inter Level routing section to toggle them on/off.

**Note**    Inter Level routing is only permitted within a single Crosspoint Group.

## Virtual Crosspoints

Virtual crosspoints extend the physical crosspoints associated with a Logical Matrix. All virtual crosspoints are processed entirely within software and only routes with a physical input and a physical output are forwarded to the Matrix Controller via a communications channel.

Virtual crosspoints belong to Logical Matrices and are identified by a separate range of connector IDs ranging contiguously from virtual point one to the maximum virtual point for the Logical Matrix.

Where a Logical Matrix supports multiple Elements only a single virtual crosspoint is used. This virtual crosspoint is used for all Elements in the Level.

## Sources

A Source is configured to contain one or more inputs, with each input residing in a different Logical Matrix. When configuring a Source, you assign specific inputs, or physical connections, to the Source name. Thereafter, when you specify that Source name, you are selecting the assigned inputs residing on Logical Matrices in Levels enabled in that Take or other operation.

The Source Name (and affected Level or Levels) is used by control panels to specify and select Sources for Take and other panel operations.

## Source Configuration Screen

This screen (Figure 78) enables configuration of all Sources that can be controlled by the **Router Controller**.

*Figure 78. Source Configuration Screen*
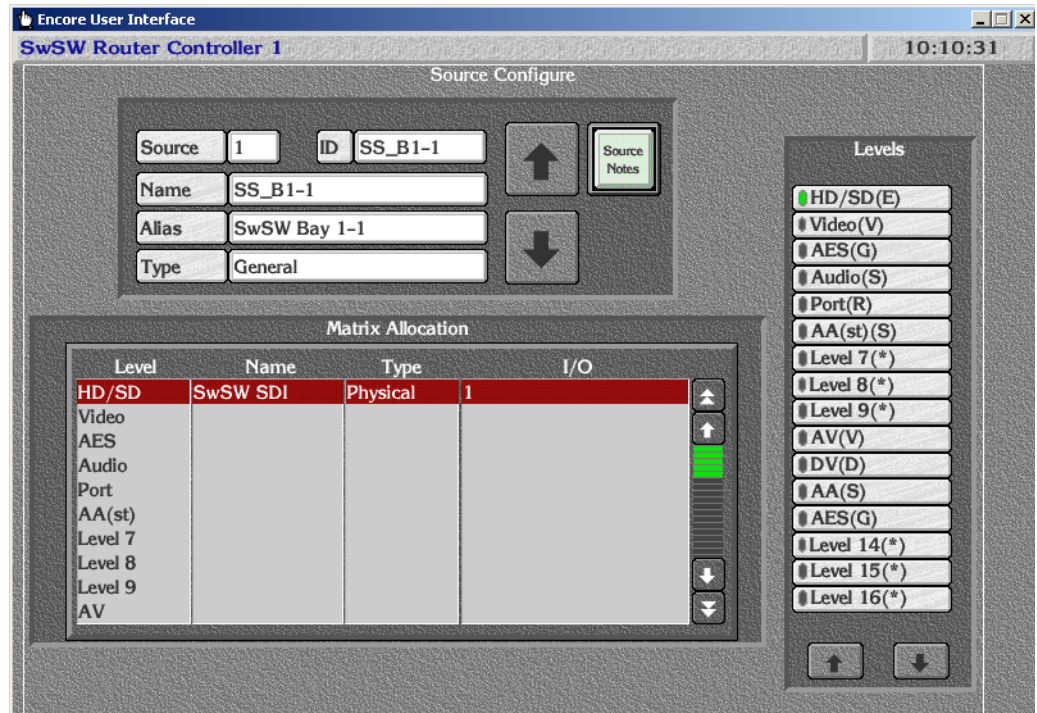


| | |
|---|---|
| **Source** | Allows a Source to be selected by number from the router database. |
| **ID** | Allows a short form name to be given to a Source. This is the name displayed on the Encore control panels and in the Local Router Panel. |
| **Up Down Arrows** | Moves the list of Sources up or down one Source per click. |
| **Source Notes** | Allows annotations for the selected Source. |
| **Name** | Allows a long form name to be given to a Source. |
| **Alias** | Allows an alias to be given to the selected Source. |

| | | |
|---|---|---|
| | **Type** | Allows the hardware type of a Source to be chosen. The default type is **General**. Others used by the Encore system include **System Tie-Line**, **Local Tie-Line**, and **Monitor**. Additional types listed are for backward compatibility with other products. |
| Matrix Allocation | **(Level column)** | A list of all of the Levels in the system. For each Level that the Source has an input, you must make an entry in the Matrix Allocation Name field, that is, pick a Logical Matrix from the list which appears when you click a Level here or in the Name column. |
| | **(Name column)** | Allows choosing a Logical Matrix from the list window to assign to the Level in column 1 on the same row. |
| | **(Type column)** | Click to toggle between Physical and Virtual definitions for the matrix listed on the same row in the Name column. |
| | **(I/O column)** | Specify the number corresponding to the physical connector ID on the Source's router matrix (for that Level). |
| Levels | **Level n indicator** | These buttons display a green indicator light beside valid routable Levels; a yellow indicator light if you can click the Level indicator button to access and see or set attributes for a Level; and a red indicator light if the crosspoint is invalid. |
| | **Up Down Arrows** | Pages up or down one screen of Levels per click. |

Clicking on the time readout on the upper right hides or displays the Menu bar.

| | | |
|---|---|---|
| Select Src / New Src / Copy & Inc | **Select Src** | Allows a Source to be selected by name or number from the list of Sources. |
| | **New Src** | Displays the first number in the router database that does not have a Source assigned to it. |
| | **Copy & Inc(rement)** | Displays the next consecutive Source number (from that currently shown on screen), with the ID and name incremented by 1. For example, suppose the current Source is Source 11, with ID "VTR1" and name "Edit Suite VTR1". Clicking the Copy & Inc button will display Source 12, with ID "VTR2" and name "Edit Suite VTR2". Connector I/O numbers will also increment. |

## Configuring a Source

The following procedures continue from , but can be used to configure Sources at any time.

40. Click the **Source** button on the Main menu to go to the Source Configure screen.

41. Click the **Source** button at the top of the Source Configure screen and enter the number of the new Source. (Alternatively you can use the arrow buttons to scroll through the Sources until you reach the desired number.)

**Note** This number will be the logical (index) number for the Source in the router database.

42. Click the **ID** button to give the Source a unique and meaningful identity (maximum 8 characters) that appears on the control panel.

This can be regarded as a short form name for the Source.

43. If you wish, click the **Source Notes** button to add details and other annotations about this Source.

*Figure 79. Source Notes screen*
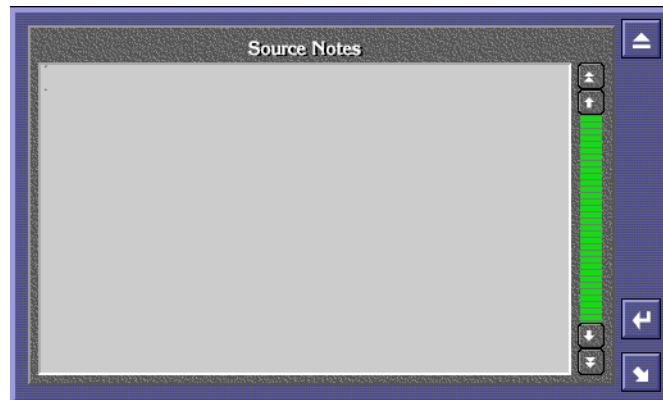


**Note** Remember to click the return icon in the screen before exiting it or your changes will be lost.

44. Click the **Name** button to give the Source a longer, more meaningful name (maximum 16 characters). This can be regarded as a long form name for the Source.

45. Click the **Alias** button to give the Source an Alias.

A Source Alias is an additional name that can be defined and/or changed from another application such as the Local Router Panel without the potential risks associated with using Router Control application. Aliases enable operators to give more meaningful temporary names to Sources and can then be displayed on Encore control panels

and the Local Router Panel instead of the underlying (actual) Source name. For example: Let's say you have a Source named SAT-1 (Satellite-1). If the signal on SAT-1 happens to be HBO, then a meaningful name might be HBO. If the signal changes to CNN, the alias can be changed to CNN without re-configuring the router.

**46.** Click the **Type** button to choose a hardware type for the Source you're configuring.

*Figure 80. Select Type window — Sources*
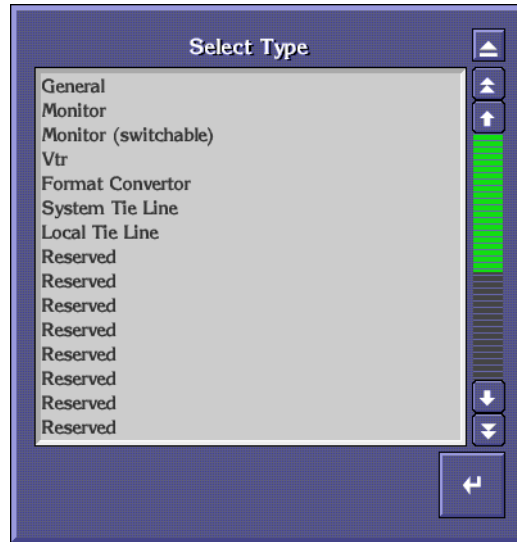


**47.** In the **Matrix Allocation** section of the screen, click in the **Name** column to the right of a Level that you want to be routed from your Source, and select the router matrix that you want to perform the Take from the list window that appears.

**48.** Click in the **Type** column to toggle between Physical and Virtual definitions for the matrix listed on the same row in the Name column.

**49.** Click in the **I/O** column next to the same Level used in Step 47. Enter the number corresponding to the physical connector ID on the Source's router matrix.

**50.** Repeat Step 47 through Step 49 until you've configured all necessary Levels for that Source.

- A green indicator next to the name of a Level in the **Levels** section confirms that the Level will be routed from the currently selected Source.

- A yellow light indicates that attributes are available for a Level.

- A red light indicates that the crosspoint is invalid. Check the matrix configuration for errors and, once corrected, click the **Config.** button on the Main menu to return to the System Configure screen and click the **Re-Sync Comms** button.

**51.** With the first Source configured, you now need to configure all the remaining Sources for the router matrix. The buttons on the Menu bar on the right of the screen can be used to aid the configuration process.

- Use the **Copy & Inc** button to copy the current Source settings and then increment the values shown opposite the **Source**, **ID**, **Name**, **Alias**, and **Type** buttons. This saves time and repetition when configuring many Sources that form a logical list. Sources can then be renamed more easily in the Names screen.

- Use the **New Src** button to select the first Source number in the router database that does not have a name assigned to it.

- Use the **Select Src** button to amend a previously configured Source. The list window that appears (Figure 81) allows selection by name or number.

*Figure 81. Select Source Screen*
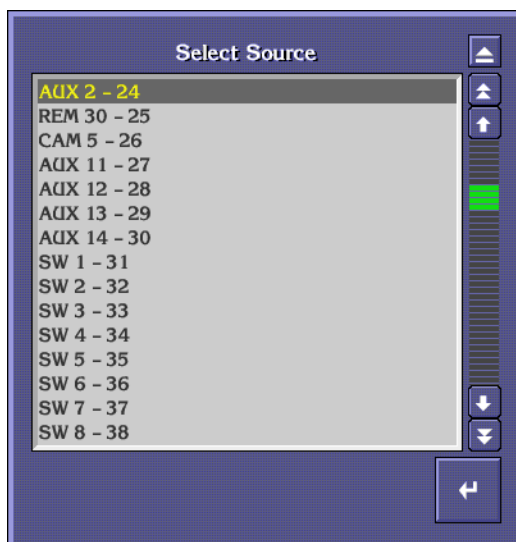
# Destinations

A Destination is configured to contain one or more outputs, with each one residing in a different Logical Matrix. A single output can't be assigned to more than one Destination. Configuring the Destination associates specific outputs (Physical Matrix connections) to the Destination name; selecting a Destination name also selects the associated outputs.

## Destination Configuration Screen

This screen enables all Destinations that can be controlled by the Router Control application to be configured.

*Figure 82. Destination Configuration Screen*
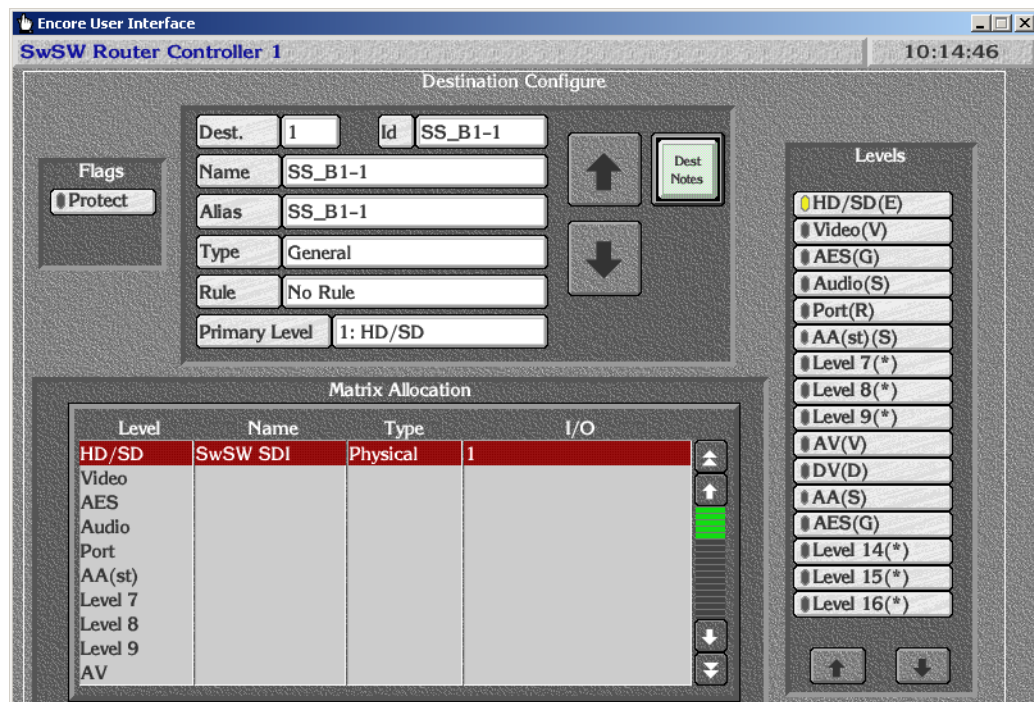


| | | |
|---|---|---|
| **Dest.** | Allows a Destination to be selected by number from the router database. | |
| **ID** | Allows a short form name to be given to a Destination. | |
| **Up Down Arrows** | Moves the list of Destinations up or down one Destination per click. | |
| **Dest Notes** | Allows annotations for the selected Destination. | |
| **Name** | Allows a long form name to be given to a Destination. | |

| | Type | Allows the hardware type of a Destination to be chosen from the list which appears. **General** is the default type. Others include System **Tie-Line**, **Local Tie-Line**, **Monitor**, etc. |
|---|---|---|
| | Rule | Allows choosing a rule to be applied to the selected Destination. |
| Flags | Protect | Toggles protection of the Destination on/off. This locks the Destination and prevents Takes from happening. |
| Matrix Allocation | (Level column) | A list of Levels in the system. |
| | (Name column) | Allows choosing a matrix from the list window to assign to the Level in column 1 on the same row. |
| | (Type column) | Click to toggle between Physical and Virtual definitions for the matrix listed on the same row in the Name column. |
| | (I/O column) | Specify the number corresponding to the physical connector ID on the Source's router matrix for that Level. |
| Levels | Level n indicator | These buttons display a green indicator light beside valid routable Levels; a yellow indicator light if you can click the Level indicator button to access and see or set attributes for a Level; and a red indicator light if the crosspoint is invalid. |
| | Up Down Arrows | Pages up or down one screen of Levels per click. |

Clicking on the time readout on the upper right hides or displays the Menu bar.

| | Select Dst. | Allows a Destination to be selected by name or number from the list of Destinations. |
|---|---|---|
| | New Dst. | Displays the first number in the router database that does not have a Destination assigned to it. |
| | Rule | Displays the Rules Configuration Screen. See Figure 86. |
| | Copy & Inc(rement) | Displays the next consecutive Destination number (from that currently shown on screen), with the ID and name incremented by 1. For example, suppose the current Destination is Destination 24, with ID "Mon1" and name "Monitor1". Clicking the **Copy & Inc** button will display Destination 25, with ID "Mon2" and name "Monitor2". |

## Configuring a Destination

The following procedures continue from *Configuring a Source* on page 133, but can be used to configure Destinations at any time.

**52.** Click the **Destination** button on the Main menu to go to the Destination Configure screen.

**53.** Click the **Dest.** button and specify the number of the new Destination.

This number represents the logical number of the Destination in the router database.

**54.** Click the **ID** button to give the Destination a unique identity (maximum 8 characters).

This can be regarded as a short form name for the Destination and is displayed on the control panels and the Local Router Panel.

**55.** Click the **Name** button to give the Destination a longer, more meaningful name (maximum 16 characters).

This can be regarded as a long form name for the Destination.

**56.** Click the **Type** button to choose the hardware type of the Destination from the list window that appears on the screen.

*Figure 83. Select Type Window*
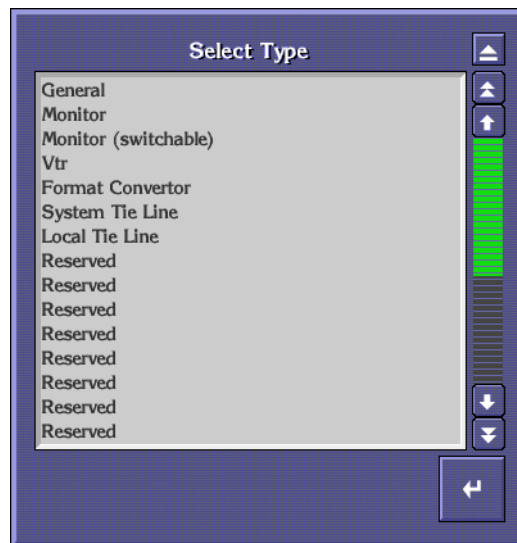


**57.** If you want to apply any restrictions to the Destination, then click the **Rule** button to choose a pre-configured set of restrictions.

For example, you may want to prevent some Sources from being routed to certain Destinations.

**Note**     Remember to return to the *System Configure Screen* and click the **Obey Rules** indicator button to enable any rules you've applied.

*Figure 84.  Select Rule Window*
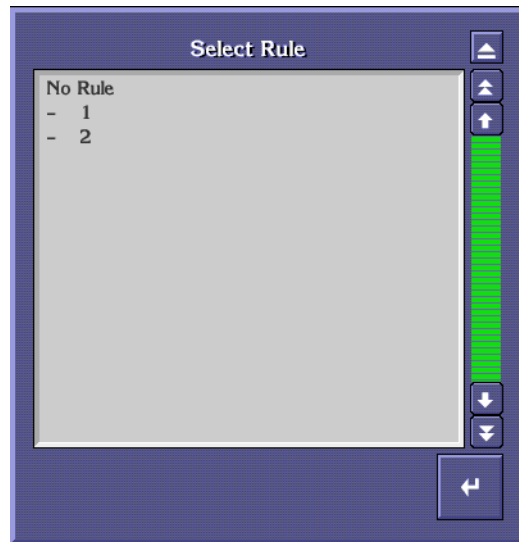


58.  In the **Matrix Allocation** section of the screen, click in the **Name** column next to a Level that you want to be assigned to your Destination, and select the Logical Matrix that you want assigned from the list window that appears on the screen.

59.  Click in the **Type** column to toggle between Physical and Virtual definitions for the matrix listed on the same row in the Name column.

60.  Click in the **I/O** column next to the same Level used in Step 58 and enter a number that maps to the physical connector ID for the Destination on the router matrix for that Level.

61.  Repeat Step 58 through Step 60 until all necessary Levels for the Destination are configured.

A green indicator next to the name of a Level in the **Levels** Area confirms that the Level will be routed to the currently selected Destination.

A yellow light indicates that attributes are available for a Level.

And a red light indicates that the crosspoint is invalid. Check the matrix configuration for errors and, once corrected, click the **Config.** button on the Main menu to return to the System Configure screen and click the **Re-Sync Comms** button.

The buttons on the menu bar on the right of the screen aid the configuration process.

•  Use the **Select Dst.** button to amend a previously configured Destination.

The list window that appears on the screen allows a selection to be made by name or number.

*Figure 85. Select Destination Window*
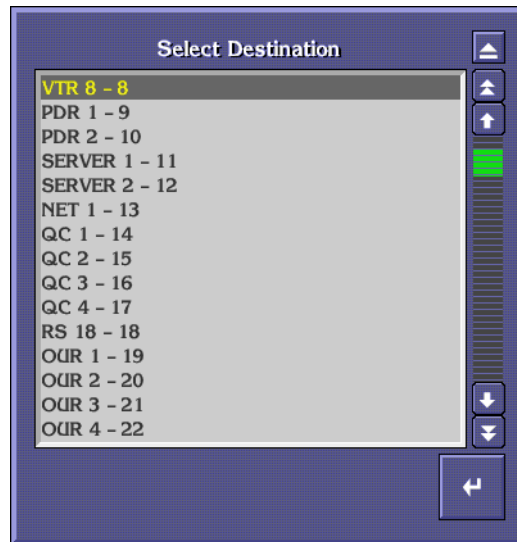


- Use the **New Dst** button to select the first Destination number in the router database that does not have a name assigned to it.

- Click the **Rules** button to open the Rules Configuration screen. See *Rules Configuration Screen* on page 140 for more details.

- Use the **Copy & Inc** button to copy the current Destination settings and then increment the values shown on the **Dest.**, **ID, Name**, and **Type** buttons by one. This saves time and repetition when configuring many Destinations that form a logical list.

## Rules Configuration Screen

The Rules Configuration Screen (Figure 86) allows a set of rules, often called Source exclusion sets, to be established that can be used to prevent certain Sources from being routed to certain Destinations.

*Figure 86. Rules Configuration Screen*



**Rule**   Displays the number of the rule you're viewing or editing.

**(Index column)**   Displays the index number of the Sources.

**(Source Names column)**   Lists all the Sources defined in the Router Controller.

**(status column)**   Toggles whether the selected Source is **Available** or **Inhibited** for this rule.

**Up Down Arrow**   Pages up or down one screen.

**Rules**

**Select**   Allows a pre-configured rule to be selected in the list window which appears.

**Copy Rule**   Displays a list of rules from which you can select one and copy its settings over the currently displayed rule.

**Name Rule**   Allows the name of the currently displayed rule to be changed.

**Add Rule**   Adds a new unnamed rule to the list of rules.

**Delete Rule**   Enables one or more rules, selected in the list window, to be deleted.

**Destinations**

**List**   Displays a list of Destinations that obey the rule currently displayed on the screen.

| | |
|---|---|
| **Add** | Allows the user to select more Destinations that are to obey the rule currently displayed on the screen. |
| **Remove** | Allows one or more Destinations, selected in the list window, to be removed from the list of Destinations that obey the currently displayed rule. |

Clicking on the time readout on the upper right hides or displays the Menu bar.



| | |
|---|---|
| **Inhibit All** | Sets the status of all Sources to **Inhibit** for the currently displayed rule. |
| **Allow All** | Sets the status for all Sources to **Available** for the currently displayed rule. |

### Creating and Defining a Rule

1. Click the **Add Rule** button.

2. Click the **Select** button to select the rule that you created in Step 1 – it will be the last (un-named) rule in the list window that appears on the screen.

3. Click the **Name Rule** button to give the rule a meaningful name using the alpha/numeric keyboard that appears on the screen.

4. Click a Source name in the **Source Names** column to toggle the status of that Source so it shows either **Available** or **Inhibited**. Choose **Available** or **Inhibited**, depending on whether you want to allow the Source to be routed or not if this rule is applied.

5. Repeat Step 4 until all Sources are displaying **Available** or **Inhibited** as required. Use the arrow keys if necessary to scroll through the list of Sources.

**Note**     The **Inhibit All** button on the Menu bar provides a quick method of setting the status of all the Sources to **Inhibited**. The **Allow All** button on the Menu bar provides a quick method of setting the status of all Sources to **Available**.

6. Click the **Add** button in the **Destinations** section of the screen to select the Destinations to which this rule will apply.

   Sources with the **Inhibited** status will not be able to be routed to these Destinations.

7. Click the **List** button to see the list of Destinations to which the rule will apply.

8.  If necessary add more Destinations to the list by clicking the **Add** button again, or remove Destinations from the list by clicking on the **Remove** button.

9.  When you're done, click the **Config.** button on the Main menu.

10. When you arrive at the System Configure screen, click the **Obey Rules** button in the Options portion of the screen to enable your configuration to abide by any rules you've defined here and will apply in the Destination Configure screen.

11. Click the **Modify** button and then the **Commit Changes** button.

    You may now apply and use your rule(s).

# Router Controller Configuration Save and Load

The Router Controller allows multiple configurations to be saved in the Sharer database and easily reloaded by selecting the desired configuration name from the list of saved configurations.

The procedures earlier in this section gave instructions on saving the Router configuration and updating the network with these changes as they were made. The following generic procedure describes how to save and load Router configurations at any time.

## Saving Router Configurations

### Saving with a New Name

1.  From the Router Controller Main screen (Figure 67 on page 102), press the **Save** button.

2.  A text entry box appears. Enter the name for the new configuration. The Filer-Fax save window then opens (Figure 87).

*Figure 87.  Filer-Fax Save popup screen*
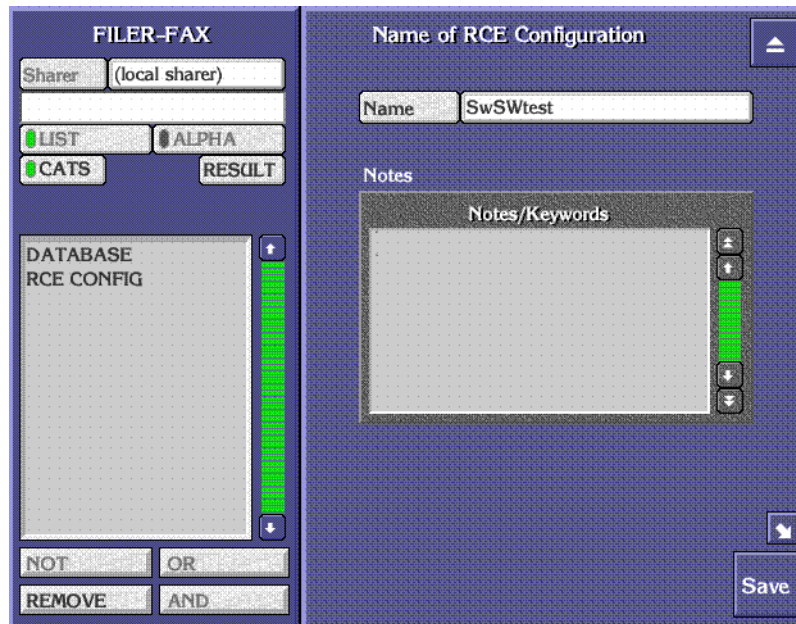


3.  Use the RCE CONFIG or DATABASE as categories because these are the categories with files that can be loaded into the Router Controller.

4.  Click the **Save** button to save the Router Controller configuration file.

**Note**     Any alterations to the saved Router Controller configuration will need to be broadcast to the rest of the Encore system using the **Commit Changes** button.

### Saving with the Existing Name

1.  Press the **Modify** button to save the current configuration under the currently chosen name.

## Loading Router Configurations

Loading a Router Controller configuration replaces the files stored on the SCB with the new files.

1.  Press the **Load** button to opens a Filer-Fax window ).

*Figure 88. Filer-Fax*
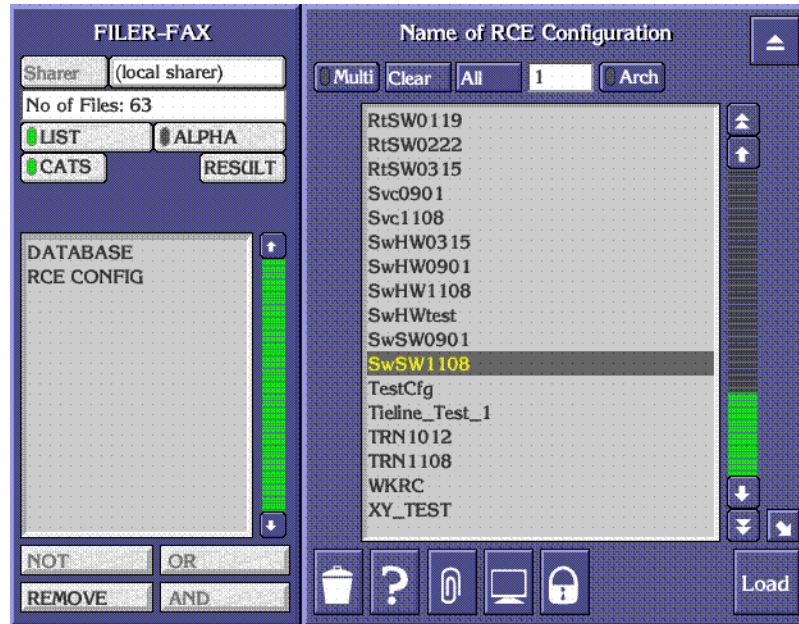


2.  Choose the Category and the file to load. All the files in category RCE CONFIG are shown by default.

**Note**    Selecting CATS will access a list of categories. Selecting one of these categories will access the files.

3.  Press the **Load** button to load the configuration into the SCB.

# Sample Router Configurations

## Two Levels in One Blocked Crosspoint Group

This example is for two audio Levels (Audio Left and Audio Right) mapped into one Crosspoint Group. The Router Controller cannot carry out inter-level routing.

*Figure 89. Two Levels in One Blocked Crosspoint Group*
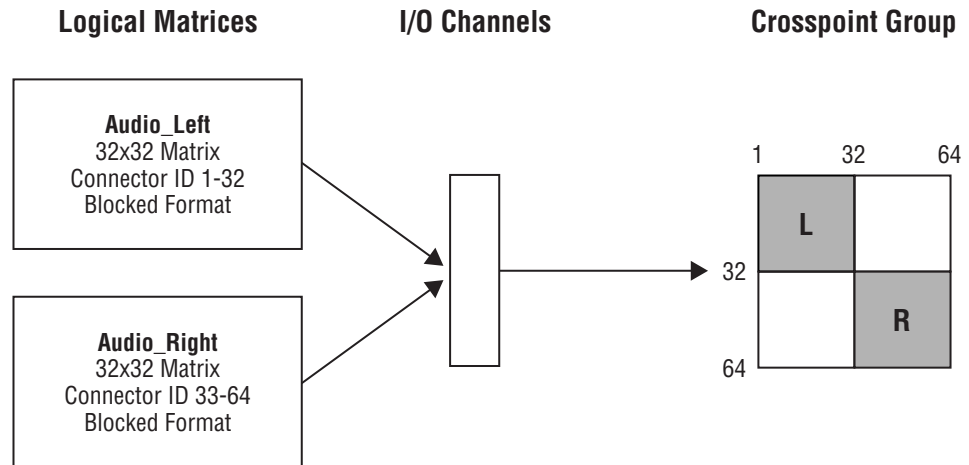


*Table 7. Configuration for Two Levels in One Blocked Crosspoint Group*

| Crosspoint Group | | | | | Matrix Controllers within Crosspoint Group | | | | Segments within Crosspoint Group | | | | | Logical Matrix | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Name | Max Input | Max Output | Matrix Controllers | Segments | Matrix Controller | I/O Channel [a] | Address [a] | Outputs | ID | Input range | Output range | Type & Factor | Unique | Name | Level | Inter levels | Elements |
| Audio_phys | 64 | 64 | 1 | 2 | 1 | A | A | Xpt Group | L | 1-32 | 1-32 | Block | Yes | Audio_Left | Audio Left | None | 1 |
| | | | | | | | | | R | 33-64 | 33-64 | Block | Yes | Audio_Right | Audio Right | None | 1 |

[a] S = Same for both crosspoint groups; D = Different for each crosspoint group; A = Any channel.

## Two Levels in Two Crosspoint Groups (Multi-Dropped)

This example is for two audio Levels (Audio Left and Audio Right) mapped into separate Crosspoint Groups using multi-dropped serial communications. The Router Controller cannot carry out inter-level routing as the Crosspoint Group is not common.

*Figure 90. Two Levels in Two Crosspoint Groups (Multi-Dropped)*
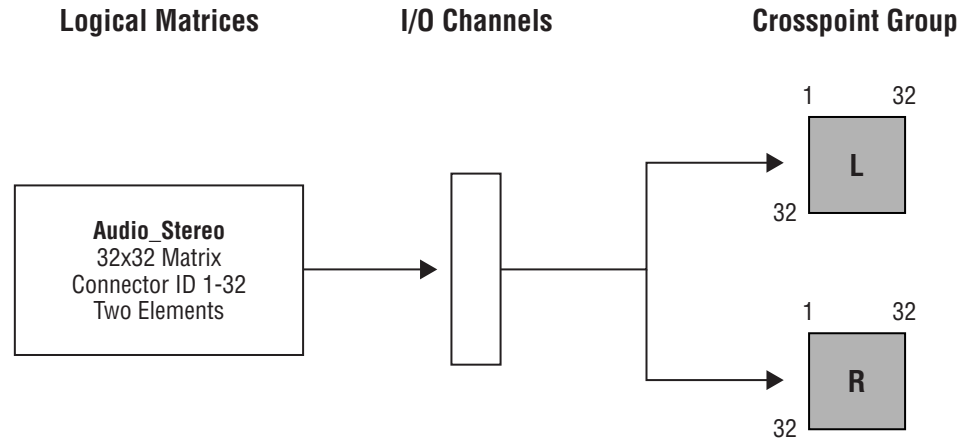


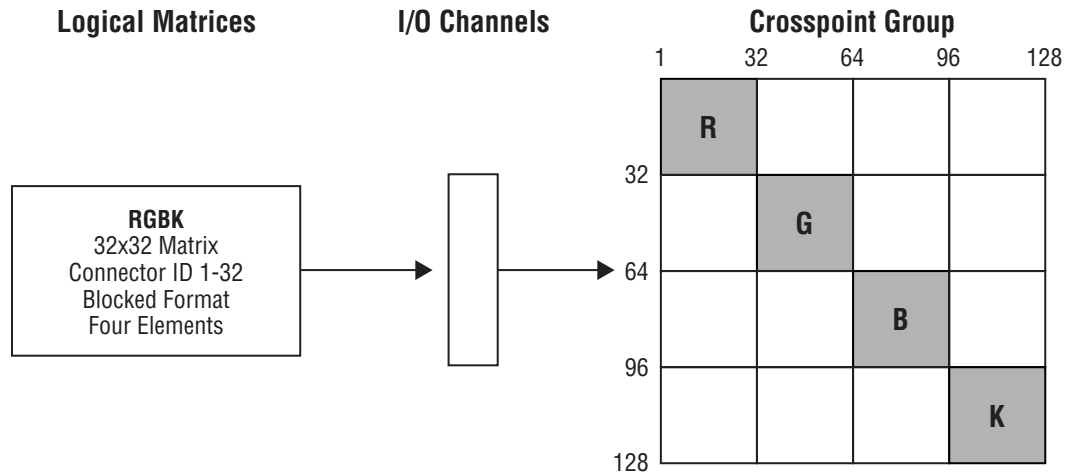*Table 8. Configuration for Two Levels in Two Crosspoint Groups (Multi-Dropped)*

| Crosspoint Group | | | | | Matrix Controllers within Crosspoint Group | | | | Segments within Crosspoint Group | | | | | Logical Matrix | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Name | Max Input | Max Output | Matrix Controllers | Segments | Matrix Controller | I/O Channel [a] | Address [a] | Outputs | ID | Input range | Output range | Type & Factor | Unique | Name | Level | Inter levels | Elements |
| Audio_L_phys | 32 | 32 | 1 | 1 | 1 | S | D | Xpt Group | L | 1-32 | 1-32 | Block | Yes | Audio_Left | Audio Left | None | 1 |
| Audio_R_phys | 32 | 32 | 1 | 1 | 1 | | | Xpt Group | R | 1-32 | 1-32 | Block | Yes | Audio_Right | Audio Right | None | 1 |

[a] S = Same for both crosspoint groups; D = Different for each crosspoint group; A = Any channel.

## Two Levels in Two Crosspoint Groups (Separate I/O)

This example is for two audio Levels (Audio Left and Audio Right) mapped into separate Crosspoint Groups using separate serial communication channels. The Router Controller cannot carry out inter-level routing as the Crosspoint Group is not common.

*Figure 91. Two Levels in Two Crosspoint Groups (Separate I.O)*



*Table 9. Configuration for Two Levels in Two Crosspoint Groups (Separate I.O)*

| Crosspoint Group | | | | Matrix Controllers within Crosspoint Group | | | | Segments within Crosspoint Group | | | | | Logical Matrix | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Name | Max Input | Max Output | Matrix Controllers | Segments | Matrix Controller | I/O Channel [a] | Address [a] | Outputs | ID | Input range | Output range | Type & Factor | Unique | Name | Level | Inter levels | Elements |
| Audio_L_phys | 32 | 32 | 1 | 1 | 1 | D | A | Xpt Group | L | 1-32 | 1-32 | Block | Yes | Audio_Left | Audio Left | None | 1 |
| Audio_R_phys | 32 | 32 | 1 | 1 | 1 | | | Xpt Group | R | 1-32 | 1-32 | Block | Yes | Audio_Right | Audio Right | None | 1 |

[a] S = Same for both crosspoint groups; D = Different for each crosspoint group; A = Any channel.

## Two Levels in One Interleaved Crosspoint Group

This example is for two audio Levels (Audio Left and Audio Right) mapped into one Crosspoint Group. The Router Controller can carry out inter-level routing.

*Figure 92. Two Levels in One Interleaved Crosspoint Group*
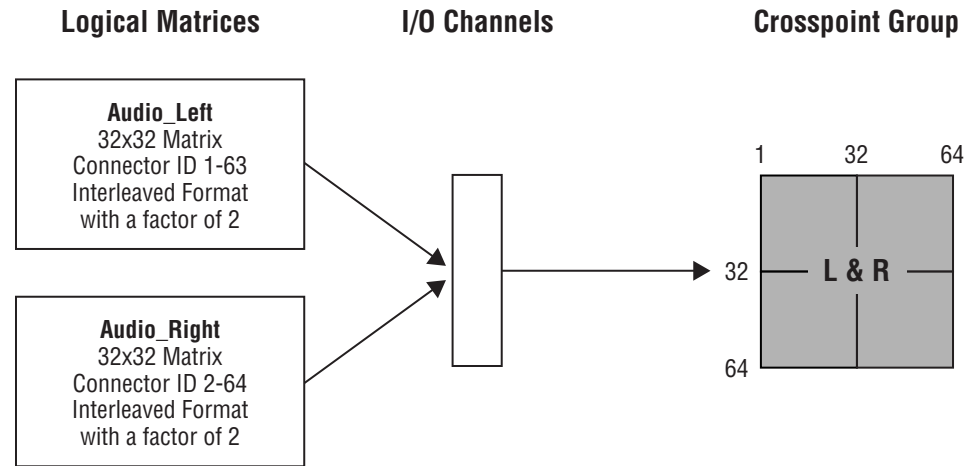


*Table 10. Configuration for Two Levels in One Interleaved Crosspoint Group*

| Crosspoint Group | | | | | Matrix Controllers within Crosspoint Group | | | | Segments within Crosspoint Group | | | | | Logical Matrix | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Name | Max Input | Max Output | Matrix Controllers | Segments | Matrix Controller | I/O Channel [a] | Address [a] | Outputs | ID | Input range | Output range | Type & Factor | Unique | Name | Level | Inter levels | Elements |
| Audio_phys | 64 | 64 | 1 | 2 | 1 | A | A | Xpt Group | L | 1-63 | 1-63 | Interleave Factor 2 | Yes | Audio_Left | Audio Left | Audio Right | 1 |
| | | | | | | | | | R | 2-64 | 2-64 | Interleave Factor 2 | Yes | Audio_Right | Audio Right | Audio Left | 1 |

[a] S = Same for both crosspoint groups; D = Different for each crosspoint group; A = Any channel.

## Two Elements in One Blocked Crosspoint Group

This example is for one Level (Audio Stereo) containing two elements (Audio Left and Audio Right) which is mapped into one Crosspoint Group.

*Figure 93.  Two Elements in One Blocked Crosspoint Group*
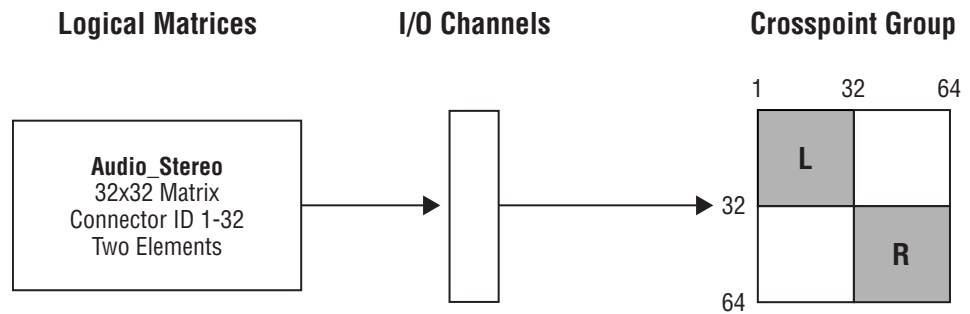


In this example the Audio Left element has connector IDs 1 – 32, and Audio Right has connector IDs 33 – 64. A Source or Destination using this Level has the connector ID configured for the first Level (Audio Left) and the Audio Right connector is calculated by adding 32.

*Table 11.  Configuration for Two Elements in One Blocked Crosspoint Group*

| Crosspoint Group | | | | | Matrix Controllers within Crosspoint Group | | | | Segments within Crosspoint Group | | | | | Logical Matrix | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Name | Max Input | Max Output | Matrix Controllers | Segments | Matrix Controller | I/O Channel [a] | Address [a] | Outputs | ID | Input range | Output range | Type & Factor | Unique | Name | Level | Inter levels | Elements |
| Audio_phys | 64 | 64 | 1 | 2 | 1 | A | A | Xpt Group | L | 1-32 | 1-32 | Block | Yes | Audio_Stereo | Audio Stereo | None | 2 |
| | | | | | | | | | R | 33-64 | 33-64 | Block | Yes | | | | |

[a] S = Same for both crosspoint groups; D = Different for each crosspoint group; A = Any channel.

## Two Elements in Two Crosspoint Groups (Multi-Dropped)

This example is for one Level (Audio Stereo) containing 2 elements (Audio Left and Right) which is mapped into two Crosspoint Group using multi-dropped serial communications.

*Figure 94.  Two Elements in Two Crosspoint Group (Multi-Dropped)*
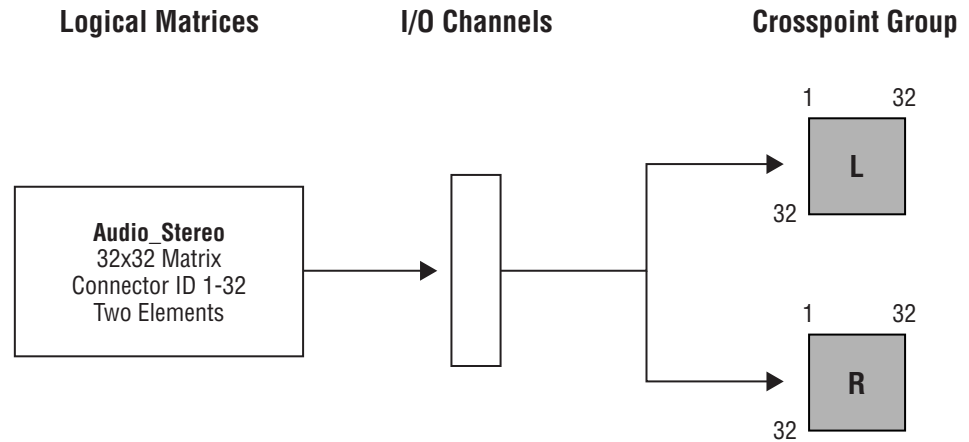


In this example the Audio Left element has connector IDs 1 – 32, and Audio Right also have connector ids 1 - 32. A Source or Destination using this Level has the connector id configured for the first Level (Audio Left) and the Audio Right connector automatically uses the same connector ID in the second Crosspoint Group.

*Table 12.  Configuration for Two Elements in Two Crosspoint Group (Multi-Dropped)*

| Crosspoint Group | | | | | Matrix Controllers within Crosspoint Group | | | | Segments within Crosspoint Group | | | | | Logical Matrix | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Name | Max Input | Max Output | Matrix Controllers | Segments | Matrix Controller | I/O Channel [a] | Address [a] | Outputs | ID | Input range | Output range | Type & Factor | Unique | Name | Level | Inter levels | Elements |
| Audio_L_phys | 32 | 32 | 1 | 1 | 1 | S | D | Xpt Group | L | 1-32 | 1-32 | Block | Yes | Audio_Stereo | Audio Stereo | None | 2 |
| Audio_R_phys | 32 | 32 | 1 | 1 | 1 | | | Xpt Group | R | 1-32 | 1-32 | Block | Yes | | | | |

[a] S = Same for both crosspoint groups; D = Different for each crosspoint group; A = Any channel.

## Two Elements in Two Crosspoint Groups (Separate I/O)

This example is for one Level (Audio Stereo) containing two elements (Audio Left and Right) which is mapped into two Crosspoint Groups using independent serial communications.

*Figure 95. Two Elements in Two Crosspoint Groups (Separate I/O)*
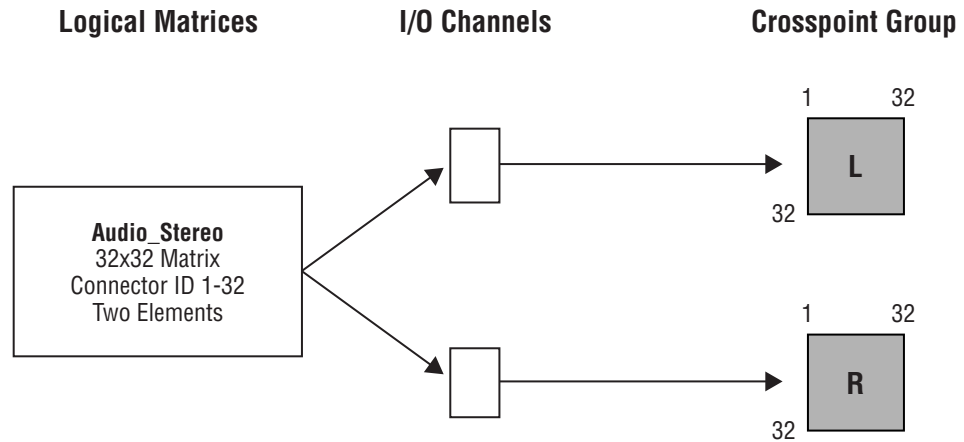


In this example the Audio Left element has connector IDs 1 – 32, and Audio Right also have connector IDs 1 - 32. A Source or Destination using this Level has the connector ID configured for the first Level (Audio Left) and the Audio Right connector automatically uses the same connector ID in the second Crosspoint Group.

*Table 13. Configuration for Two Elements in Two Crosspoint Groups (Separate I/O)*

| Crosspoint Group | | | | | Matrix Controllers within Crosspoint Group | | | | Segments within Crosspoint Group | | | | | | Logical Matrix | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Name | Max Input | Max Output | Matrix Controllers | Segments | Matrix Controller | I/O Channel [a] | Address [a] | Outputs | ID | Input range | Output range | Type & Factor | Unique | Name | Level | Inter levels | Elements |
| Audio_L_phys | 32 | 32 | 1 | 1 | 1 | D | A | Xpt Group | L | 1-32 | 1-32 | Block | Yes | Audio_Stereo | Audio Stereo | None | 2 |
| Audio_R_phys | 32 | 32 | 1 | 1 | 1 | | | Xpt Group | R | 1-32 | 1-32 | Block | Yes | | | | |

[a] S = Same for both crosspoint groups; D = Different for each crosspoint group; A = Any channel.

# RGB and Key as Two Levels in One Crosspoint Group

This example is for two Levels mapped onto the same Crosspoint Group. The first Level has three elements (R, G and B) and the second Level has one element (Key).

*Figure 96. RGB and Key as Two Levels in One Crosspoint Group*
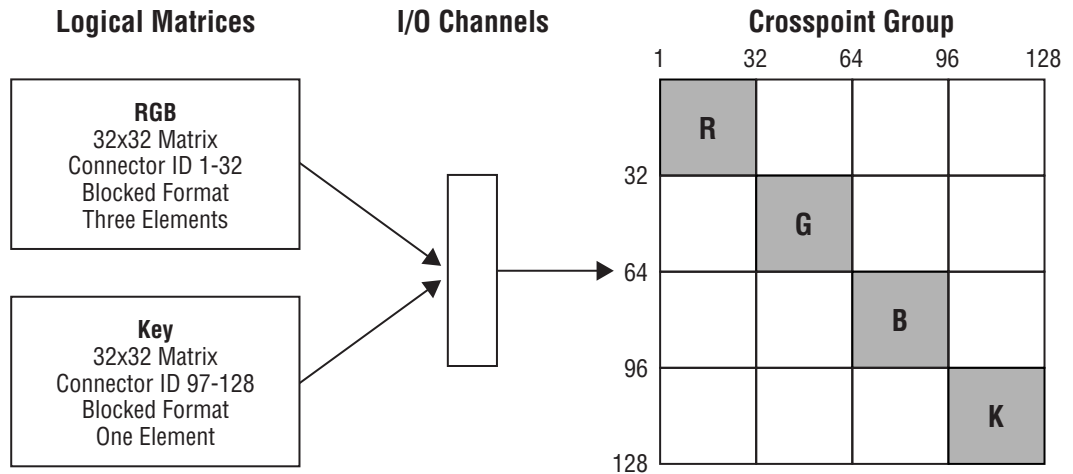


A Source (or Destination) Level mapped to the RGB logical matrix (on the RGB Level) is configured with a connector in the range 1 to 32. Connectors in the range 33 to 64 and 65 to 96 are automatically used for second and third elements. The key logical matrix has a single element and uses connectors in the range 97 to 128.

*Table 14. Configuration for RGB and Key as Two Levels in One Crosspoint Group*

| Crosspoint Group | | | | | Matrix Controllers within Crosspoint Group | | | | Segments within Crosspoint Group | | | | | Logical Matrix | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Name | Max Input | Max Output | Matrix Controllers | Segments | Matrix Controller | I/O Channel [a] | Address [a] | Outputs | ID | Input range | Output range | Type & Factor | Unique | Name | Level | Inter levels | Elements |
| RGBK_Phys | 128 | 128 | 1 | 4 | 1 | A | A | Xpt Group | R | 1-32 | 1-32 | Block | Yes | RGB | RGB | None | 3 |
| | | | | | | | | | G | 33-64 | 33-64 | Block | Yes | | | | |
| | | | | | | | | | B | 65-96 | 65-96 | Block | Yes | | | | |
| | | | | | | | | | K | 97-128 | 97-128 | Block | Yes | Key | Key | None | 1 |

[a] S = Same for both crosspoint groups; D = Different for each crosspoint group; A = Any channel.

## RGB and Key as One Level in One Crosspoint Group

This example is for one Level mapped onto a single Crosspoint Group. This Level has four elements (R, G, B and Key).

*Figure 97. RGB and Key as One Level in One Crosspoint Group*



A Source (or Destination) Level mapped to the RGBK logical matrix (on the RGBK Level) is configured with a connector in the range 1 to 32. Connectors in the range 33 to 64, 65 to 96 and 97 to 128 are automatically used for second, third and fourth elements.

*Table 15. Configuration for RGB and Key as One Level in One Crosspoint Group*

| Crosspoint Group | | | | | Matrix Controllers within Crosspoint Group | | | | Segments within Crosspoint Group | | | | | | Logical Matrix | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Name | Max Input | Max Output | Matrix Controllers | Segments | Matrix Controller | I/O Channel [a] | Address [a] | Outputs | ID | Input range | Output range | Type & Factor | Unique | Name | Level | Inter levels | Elements |
| RGBK_Phys | 128 | 128 | 1 | 4 | 1 | A | A | Xpt Group | R | 1-32 | 1-32 | Block | Yes | RGBK | RGBK | None | 4 |
| | | | | | | | | | G | 33-64 | 33-64 | Block | Yes | | | | |
| | | | | | | | | | B | 65-96 | 65-96 | Block | Yes | | | | |
| | | | | | | | | | K | 97-128 | 97-128 | Block | Yes | | | | |

[a] S = Same for both crosspoint groups; D = Different for each crosspoint group; A = Any channel.

## Four Elements in Two Crosspoint Group (Blocked)

This example is for one Level (AES 1 - 4) containing 4 elements (AES 1, AES 2, AES 3 and AES 4) which is mapped into two Crosspoint Groups and uses blocked format. Multi-dropped serial communications are used.

*Figure 98. Four Elements in Two Crosspoint Group (Blocked)*
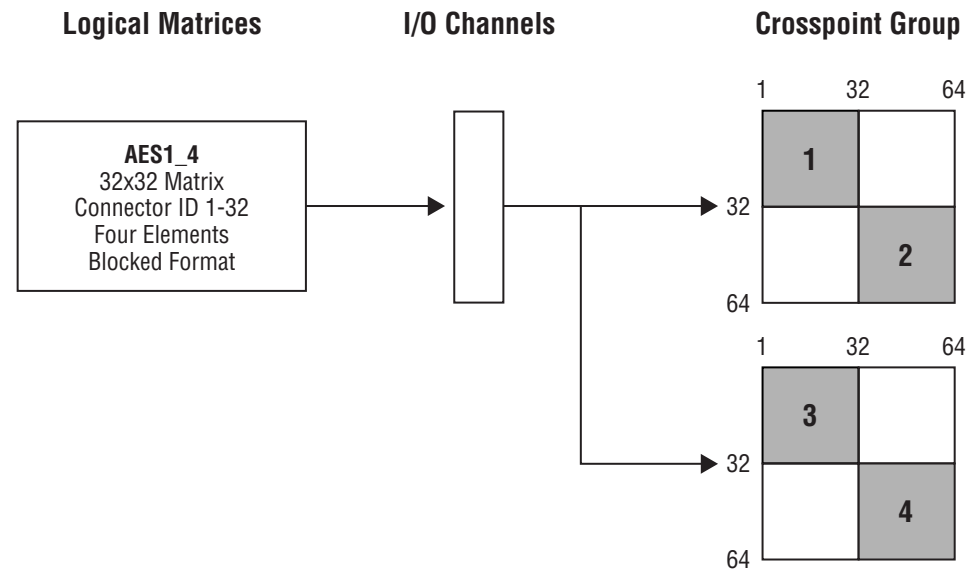


A Source (or Destination) Level mapped to the AES1_4 logical matrix (on the AES 1 - 4 Level) is configured with a connector in the range 1 to 32. The AES 1 element uses the first Crosspoint Group with the configured crosspoint (1 to 32). The second element (AES 2) automatically uses the first Crosspoint Group with crosspoints in the range 33 to 64 (configured crosspoint + 32). The third element (AES 3) automatically uses the second Crosspoint Group with crosspoints in the range 1 to 32 (configured crosspoint). The fourth element (AES 4) automatically uses the second Crosspoint Group with crosspoints in the range 33 to 64 (configured crosspoint + 32).

### Multi-drop Serial Communications

This example is as described above.

### Independent Serial Communications

This example is similar to *Multi-drop Serial Communications* above, but uses two independent I/O channels, one to each of the Crosspoint Groups, as in example *Two Elements in Two Crosspoint Groups (Separate I/O)* on page 152.

*Table 16. Configuration for Four Elements in Two Crosspoint Group (Blocked)*

| | Crosspoint Group | | | | | Matrix Controllers within Crosspoint Group | | | Segments within Crosspoint Group | | | | | | Logical Matrix | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Name | Max Input | Max Output | Matrix Controllers | Segments | Matrix Controller | I/O Channel [a] | Address [a] | Outputs | ID | Input range | Output range | Type & Factor | Unique | Name | Level | Inter levels | Elements |
| **Multi-drop Serial Communications** | AES_12Phys | 64 | 64 | 1 | 2 | 1 | S | D | Xpt Group | 1 | 1-32 | 1-32 | Block | Yes | AES1_4 | AES 1234 | None | 4 |
| | | | | | | | | | | 2 | 33-64 | 33-64 | Block | Yes | | | | |
| | AES_34Phys | 64 | 64 | 1 | 2 | 1 | | | Xpt Group | 3 | 1-32 | 1-32 | Block | Yes | | | | |
| | | | | | | | | | | 4 | 33-64 | 33-64 | Block | Yes | | | | |
| **Independent Serial Communications** | AES_12Phys | 64 | 64 | 1 | 2 | 1 | D | A | Xpt Group | 1 | 1-32 | 1-32 | Block | Yes | AES1_4 | AES 1234 | None | 4 |
| | | | | | | | | | | 2 | 33-64 | 33-64 | Block | Yes | | | | |
| | AES_34Phys | 64 | 64 | 1 | 2 | 1 | | | Xpt Group | 3 | 1-32 | 1-32 | Block | Yes | | | | |

[a] S = Same for both crosspoint groups; D = Different for each crosspoint group; A = Any channel.

## Four Elements and Two Crosspoint Group (Interleaved)

This example is for one Level (AES 1 - 4) containing four elements (AES 1, AES 2, AES 3 and AES 4) which is mapped into two Crosspoint Groups and uses interleaved format.

*Figure 99.  Four Elements and Two Crosspoint Group (Interleaved)*
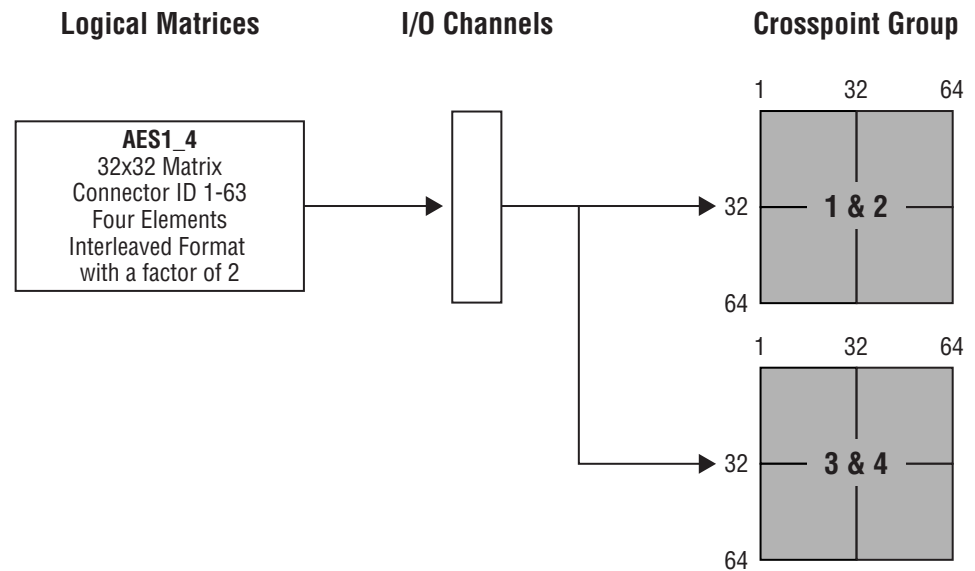


A Source (or Destination) Level mapped to the AES1_4 logical matrix (on the AES 1 - 4 Level) is configured with an odd numbered connector in the range 1 to 63 (total of 32 connectors available). The AES 1 element uses the first Crosspoint Group with the configured crosspoint (1 to 63 odd). The second element (AES 2) automatically uses the first Crosspoint Group with crosspoints in the range 2 to 64 (configured crosspoint + 1). The third element (AES 3) automatically uses the second Crosspoint Group with crosspoints in the range 1 to 63 (configured crosspoint). The fourth element (AES 4) automatically uses the second Crosspoint Group with crosspoints in the range 2 to 64 (configured crosspoint + 1).

### Multi-drop Serial Communications

This example is as described above.

### Independent Serial Communications

This example is similar to *Multi-drop Serial Communications* above, but uses two independent I/O channels, one to each of the Crosspoint Groups, as in example *Two Elements in Two Crosspoint Groups (Separate I/O)* on page 152.

*Table 17.  Configuration for Four Elements and Two Crosspoint Group (Interleaved)*

| | Crosspoint Group | | | | | Matrix Controllers within Crosspoint Group | | | Segments within Crosspoint Group | | | | | Logical Matrix | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Name | Max Input | Max Output | Matrix Controllers | Segments | Matrix Controller | I/O Channel [a] | Address [a] | Outputs | ID | Input range | Output range | Type & Factor | Unique | Name | Level | Inter levels | Elements |
| **Multi-drop Serial Communications** | AES_12Phys | 64 | 64 | 1 | 2 | 1 | S | D | Xpt Group | 1 | 1-63 | 1-63 | Interleave Factor 2 | Yes | AES1_4 | AES 1234 | None | 4 |
| | | | | | | | | | | 2 | 2-64 | 2-64 | Interleave Factor 2 | Yes | | | | |
| | AES_34Phys | 64 | 64 | 1 | 2 | 1 | | | Xpt Group | 3 | 1-63 | 1-63 | Interleave Factor 2 | Yes | | | | |
| | | | | | | | | | | 4 | 2-64 | 2-64 | Interleave Factor 2 | Yes | | | | |
| **Independent Serial Communications** | AES_12Phys | 64 | 64 | 1 | 2 | 1 | D | A | Xpt Group | 1 | 1-63 | 1-63 | Interleave Factor 2 | Yes | AES1_4 | AES 1234 | None | 4 |
| | | | | | | | | | | 2 | 2-64 | 2-64 | Interleave Factor 2 | Yes | | | | |
| | AES_34Phys | 64 | 64 | 1 | 2 | 1 | | | Xpt Group | 3 | 1-63 | 1-63 | Interleave Factor 2 | Yes | | | | |
| | | | | | | | | | | 4 | 2-64 | 2-64 | Interleave Factor 2 | Yes | | | | |

[a] S = Same for both crosspoint groups; D = Different for each crosspoint group; A = Any channel.

## Four Levels and Two Crosspoint Group (Blocked)

This example is for four Levels (AES 1, AES 2, AES 3 and AES 4) each containing a single element. AES 1 and AES 2 are mapped to the same Crosspoint Group. AES 3 and AES 4are mapped to a second Crosspoint Group. The logical matrices use blocked format.

*Figure 100.  Four Levels and Two Crosspoint Group (Blocked)*
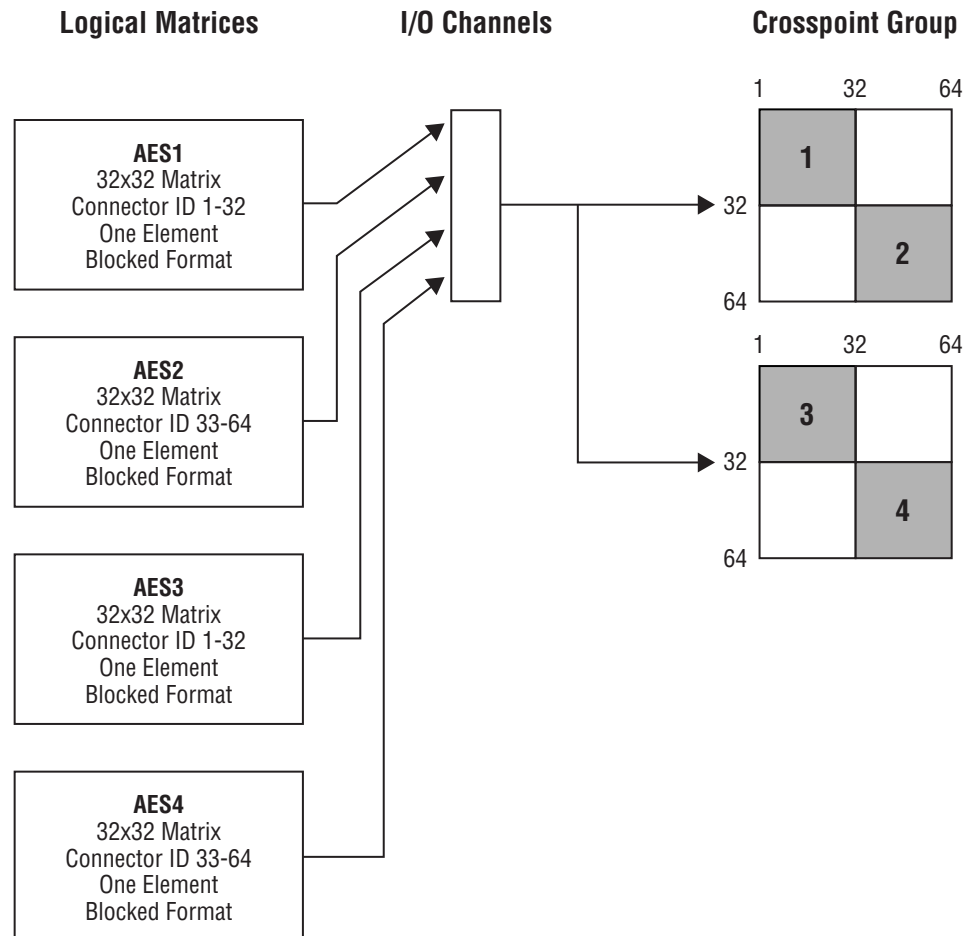


Source (or Destination) Levels are independently mapped to the four logical matrices (AES1, AES2, AES3 or AES4) on the appropriate Level. Logical matrix AES1 uses the first Crosspoint Group with connectors in the range 1 to 32. Logical matrix AES2 uses the first Crosspoint Group with connectors in the range 33 to 64. Logical matrix AES3 uses the second Crosspoint Group with connectors in the range 1 to 32. Logical matrix AES4 uses the second Crosspoint Group with connectors in the range 33 to 64.

### Multi-drop Serial Communications

This example is as described above.

### Independent Serial Communications

This example is similar to *Multi-drop Serial Communications* above but uses two independent I/O channels, one to each of the Crosspoint Groups, as in example *Two Elements in Two Crosspoint Groups (Separate I/O)*

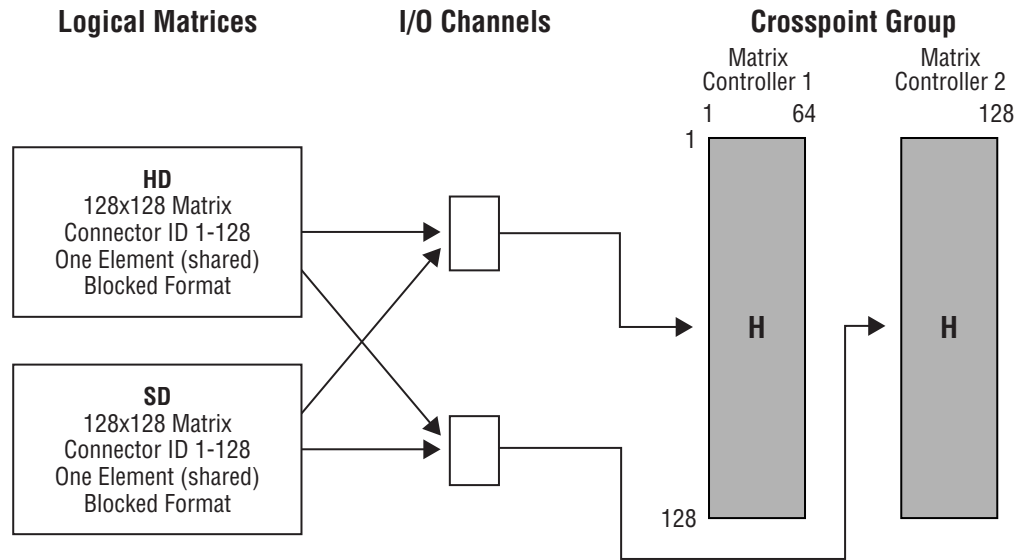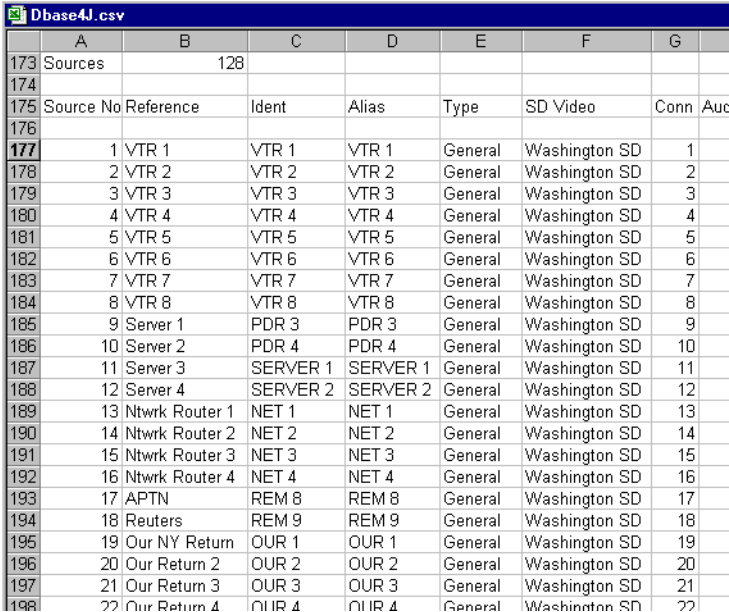*Table 18.  Configuration for Four Levels and Two Crosspoint Group (Blocked)*

| | | Crosspoint Group | | | | Matrix Controllers within Crosspoint Group | | | | | Segments within Crosspoint Group | | | | | Logical Matrix | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Name | Max Input | Max Output | Matrix Controllers | Segments | Matrix Controller | I/O Channel [a] | Address [a] | Outputs | ID | Input range | Output range | Type & Factor | Unique | Name | Level | Inter levels | Elements |
| **Multi-drop Serial Communications** | | AES_12Phys | 64 | 64 | 1 | 2 | 1 | | | Xpt Group | 1 | 1-32 | 1-32 | Block | Yes | AES1 | AES1 | None | 1 |
| | | | | | | | | | | | 2 | 33-64 | 33-64 | Block | Yes | AES2 | AES2 | None | 1 |
| | | AES_34Phys | 64 | 64 | 1 | 2 | 1 | S | D | Xpt Group | 3 | 1-32 | 1-32 | Block | Yes | AES3 | AES3 | None | 1 |
| | | | | | | | | | | | 4 | 33-64 | 33-64 | Block | Yes | AES4 | AES4 | None | 1 |
| **Independent Serial Communications** | | AES_12Phys | 64 | 64 | 1 | 2 | 1 | | | Xpt Group | 1 | 1-32 | 1-32 | Block | Yes | AES1 | AES1 | None | 1 |
| | | | | | | | | | | | 2 | 33-64 | 33-64 | Block | Yes | AES2 | AES2 | None | 1 |
| | | AES_34Phys | 64 | 64 | 1 | 2 | 1 | D | A | Xpt Group | 3 | 1-32 | 1-32 | Block | Yes | AES3 | AES3 | None | 1 |
| | | | | | | | | | | | 4 | 33-64 | 33-64 | Block | Yes | AES4 | AES4 | None | 1 |

[a] S = Same for both crosspoint groups; D = Different for each crosspoint group; A = Any channel.

## Four Levels and Two Crosspoint Groups (Interleaved)

This example is for four Levels (AES 1, AES 2, AES 3 and AES 4) each containing a single element. AES 1 and AES 2 are mapped to the same Crosspoint Group. AES 3 and AES 4are mapped to a second Crosspoint Group. The logical matrices use interleaved format.

*Figure 101.  Four Levels and Two Crosspoint Groups (Interleaved)*
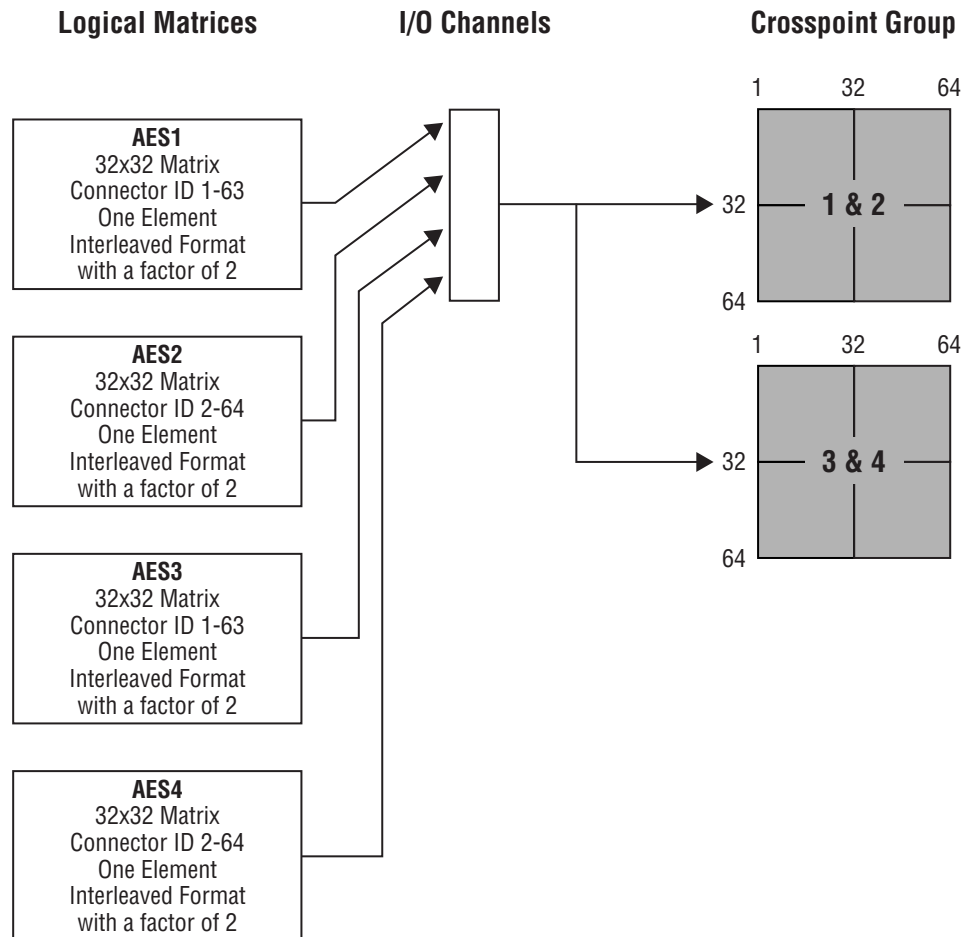


Source (or Destination) Levels are independently mapped to the four logical matrices (AES1, AES2, AES3 or AES4) on the appropriate Level. Logical matrix AES1 uses the first Crosspoint Group with odd connectors in the range 1 to 63 (total of 32 connectors). Logical matrix AES2 uses the first Crosspoint Group with even connectors in the range 2 to 64. Logical matrix AES3 uses the second Crosspoint Group with odd connectors in the range 1 to 63. Logical matrix AES4 uses the second Crosspoint Group with even connectors in the range 2 to 64.

### Multi-drop Serial Communications

This example is as described above.

### Independent Serial Communications

This example is similar to *Multi-drop Serial Communications* above but uses two independent I/O channels, one to each of the Crosspoint Groups. Logical matrices AES1 and AES2 use the first I/O channel and the first Crosspoint Group. Logical matrices AES3 and AES4 use the second I/O channel and the second Crosspoint Group.

*Table 19.  Configuration for Four Levels and Two Crosspoint Groups (Interleaved)*

| | Crosspoint Group | | | | | Matrix Controllers within Crosspoint Group | | | Segments within Crosspoint Group | | | | | Logical Matrix | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Name | Max Input | Max Output | Matrix Controllers | Segments | Matrix Controller | I/O Channel [a] | Address [a] | Outputs | ID | Input range | Output range | Type & Factor | Unique | Name | Level | Inter levels | Elements |
| **Multi-drop Serial Communications** | AES_12Phys | 64 | 64 | 1 | 2 | 1 | S | D | Xpt Group | 1 | 1-63 | 1-63 | Interleave Factor 2 | Yes | AES1 | AES1 | None | 1 |
| | | | | | | | | | | 2 | 2-64 | 2-64 | Interleave Factor 2 | Yes | AES2 | AES2 | None | 1 |
| | AES_34Phys | 64 | 64 | 1 | 2 | 1 | | | Xpt Group | 3 | 1-63 | 1-63 | Interleave Factor 2 | Yes | AES3 | AES3 | None | 1 |
| | | | | | | | | | | 4 | 2-64 | 2-64 | Interleave Factor 2 | Yes | AES4 | AES4 | None | 1 |
| **Independent Serial Communications** | AES_12Phys | 64 | 64 | 1 | 2 | 1 | D | A | Xpt Group | 1 | 1-63 | 1-63 | Interleave Factor 2 | Yes | AES1 | AES1 | None | 1 |
| | | | | | | | | | | 2 | 2-64 | 2-64 | Interleave Factor 2 | Yes | AES2 | AES2 | None | 1 |
| | AES_34Phys | 64 | 64 | 1 | 2 | 1 | | | Xpt Group | 3 | 1-63 | 1-63 | Interleave Factor 2 | Yes | AES3 | AES3 | None | 1 |
| | | | | | | | | | | 4 | 2-64 | 2-64 | Interleave Factor 2 | Yes | AES4 | AES4 | None | 1 |

[a] S = Same for both crosspoint groups; D = Different for each crosspoint group; A = Any channel.

## RGB and Key as Two Levels and Two Crosspoint Groups

This example is for two Levels (RGB and Key) with the RGB Level containing 3 elements (R, G and B) and the Key Level containing one element. The R and G elements are mapped onto one Crosspoint Group. The B element and the key Level is mapped onto a second Crosspoint Group.

*Figure 102.  RGB and Key as Two Levels and Two Crosspoint Groups*
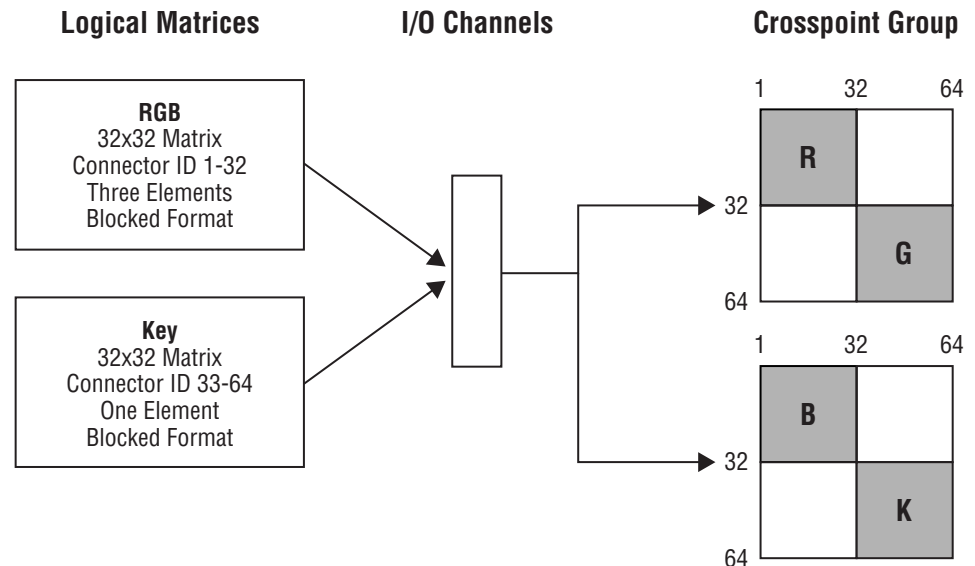


A Source (or Destination) Level mapped to the RGB logical matrix is configured with a connector in the range 1 to 32. The R element uses the first Crosspoint Group with the configured crosspoint (1 to 32). The second element (G) automatically uses the first Crosspoint Group with crosspoints in the range 33 to 64 (configured crosspoint + 32). The third element (B) automatically uses the second Crosspoint Group with crosspoints in the range 1 to 32 (configured crosspoint). The Key logical matrix is on another Level with a single element. Sources or Destination Levels mapped to the Key logical matrix uses connectors in the range 33 to 64 on the second Crosspoint Group.

### Multi-drop Serial Communications

This example is as described above.

### Independent Serial Communications

This example is similar to *Multi-drop Serial Communications* above but uses two independent I/O channels, one to each of the Crosspoint Groups.

*Table 20. Configuration for RGB and Key as Two Levels and Two Crosspoint Groups*

| | Crosspoint Group | | | | | Matrix Controllers within Crosspoint Group | | | | Segments within Crosspoint Group | | | | | Logical Matrix | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Name | Max Input | Max Output | Matrix Controllers | Segments | Matrix Controller | I/O Channel [a] | Address [a] | Outputs | ID | Input range | Output range | Type & Factor | Unique | Name | Level | Inter levels | Elements |
| **Multi-drop Serial Communications** | PAL1_Phys | 64 | 64 | 1 | 2 | 1 | | | Xpt Group | R | 1-32 | 1-32 | Block | Yes | RGB | RGB | None | 3 |
| | | | | | | | | | | G | 33-64 | 33-64 | Block | Yes | | | | |
| | PAL2_Phys | 64 | 64 | 1 | 2 | 1 | S | D | Xpt Group | B | 1-32 | 1-32 | Block | Yes | | | | |
| | | | | | | | | | | K | 33-64 | 33-64 | Block | Yes | Key | Key | None | 1 |
| **Independent Serial Communications** | PAL1_Phys | 64 | 64 | 1 | 2 | 1 | | | Xpt Group | R | 1-32 | 1-32 | Block | Yes | RGB | RGB | None | 3 |
| | | | | | | | | | | G | 33-64 | 33-64 | Block | Yes | | | | |
| | PAL2_Phys | 64 | 64 | 1 | 2 | 1 | D | A | Xpt Group | B | 1-32 | 1-32 | Block | Yes | | | | |
| | | | | | | | | | | K | 33-64 | 33-64 | Block | Yes | Key | Key | None | 1 |

[a] S = Same for both crosspoint groups; D = Different for each crosspoint group; A = Any channel.

## Multiple Levels and Shared Elements

This example is for three Levels mapped onto a single Crosspoint Group. The first Level is Audio Stereo and has two elements (Audio Left and Right). The other two Levels both have a single element (Audio Left and Audio Right) and share the same crosspoints.

*Figure 103.  Multiple Levels and Shared Elements*
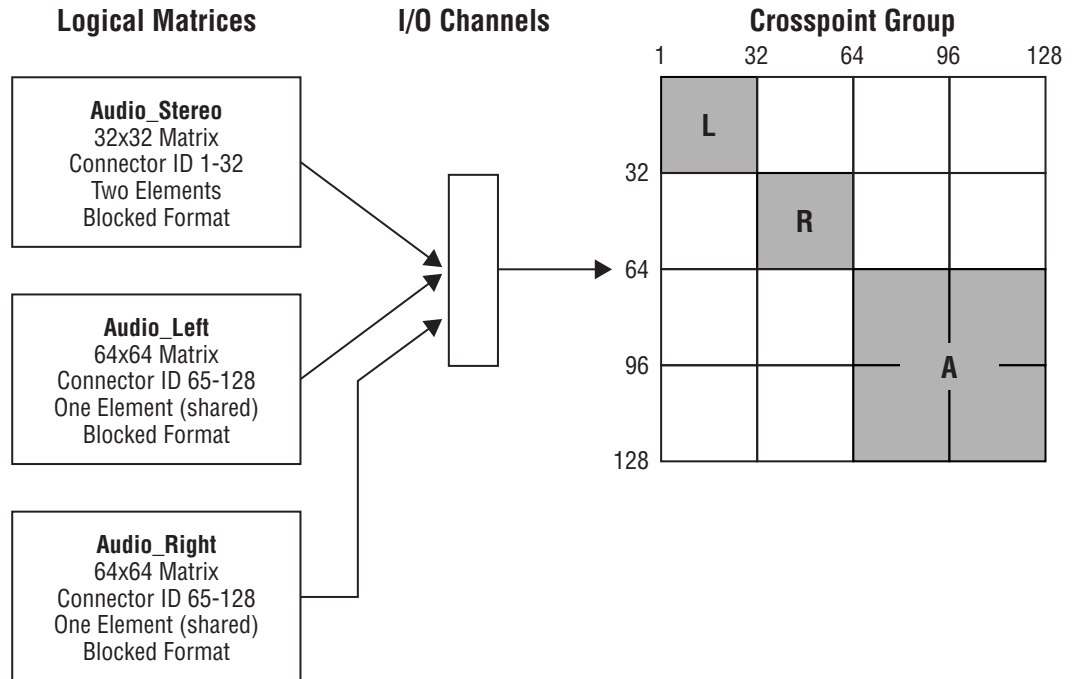


A Source (or Destination) Level mapped to the Audio_Stereo logical matrix is configured with a connector in the range 1 to 32. Connectors in the range 33 to 64 are automatically used for second element. Even if all the crosspoints were in the range 1 to 64, the Router Controller cannot carry out an interLevel Take to swap audio channels within the Audio Stereo Level (since this is a single Level).

The Audio_Left and Audio_Right logical matrices share the crosspoints in the range 65 to 128. Interlevel routing can be carried out by the Router Controller between the Audio Right and Audio Left Levels.

*Table 21.  Configuration for Multiple Levels and Shared Elements*

| Crosspoint Group | | | | | Matrix Controllers within Crosspoint Group | | | | Segments within Crosspoint Group | | | | | | Logical Matrix | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Name | Max Input | Max Output | Matrix Controllers | Segments | Matrix Controller | I/O Channel [a] | Address [a] | Outputs | ID | Input range | Output range | Type & Factor | Unique | Name | Level | Inter levels | Elements |
| Audio_Phys | 128 | 128 | 1 | 3 | 1 | A | A | Xpt Group | L | 1-32 | 1-32 | Block | Yes | Audio_Stereo | Audio Stereo | None | 2 |
| | | | | | | | | | R | 33-64 | 33-64 | Block | Yes | | | | |
| | | | | | | | | | A | 65-128 | 65-128 | Block | No | Audio_Left | Audio Left | Audio Right | 1 |
| | | | | | | | | | | | | | | Audio_Right | Audio Right | Audio Left | 1 |

[a] S = Same for both crosspoint groups; D = Different for each crosspoint group; A = Any channel.

## Multiple Matrix Controllers and Shared Elements

This example is for two Matrix Controllers configured as a single 128 x 128 Crosspoint Group. There are two Levels (HD and SD) which share all the crosspoints.

*Figure 104. Multiple Matrix Controllers and Shared Elements*



The HD and SD logical matrices share the crosspoints in the range 1 to 128. Interlevel routing should not be enabled to ensure that the Router Controller does not switch an SD Source to an HD Destination or vice versa.

*Table 22. Configuration for Multiple Matrix Controllers and Shared Elements*

| Crosspoint Group | | | | | Matrix Controllers within Crosspoint Group | | | | Segments within Crosspoint Group | | | | | Logical Matrix | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Name | Max Input | Max Output | Matrix Controllers | Segments | Matrix Controller | I/O Channel [a] | Address [a] | Outputs | ID | Input range | Output range | Type & Factor | Unique | Name | Level | Inter levels | Elements |
| HD_Phys | 128 | 128 | 2 | 1 | 1 | D | A | 64 | H | 1-128 | 1-128 | Block | No | HD | HD | None | 1 |
| | | | | | 2 | | | 64 | | | | | | SD | SD | None | 1 |

[a] S = Same for both crosspoint groups; D = Different for each crosspoint group; A = Any channel.

# Configuration Export and Import

Encore allows you to share Router configurations between sites by exporting/importing comma separated values (CSV) files containing the configuration information. The CSV files can be saved to any computer on the network by specifying a path. Excel can open or save CSV files. This section tells you how to export and import such files.

*Figure 105. Portion of Sample CSV File*



## Exporting a Configuration

1.  If you're not there already, click the **Config.** button on the Main menu to open the System Configure screen.

2.  Click the **Export** button in the Load Save section of the screen.

    The Export to CSV Spreadsheet window (Figure 106) will open.

*Figure 106. Export to CSV Spreadsheet Window*

**3.** If you wish, change the default file name in the **File Name** field.

The CSV extension will be automatically appended if you don't enter it manually.

**4.** Click the Path button to browse to the storage location for your file.

The Shared Directories window (Figure 107) will open. fd0 is your PC floppy disk drive; hd0 is your PC primary hard disk.

*Figure 107.  Shared Directories Window*
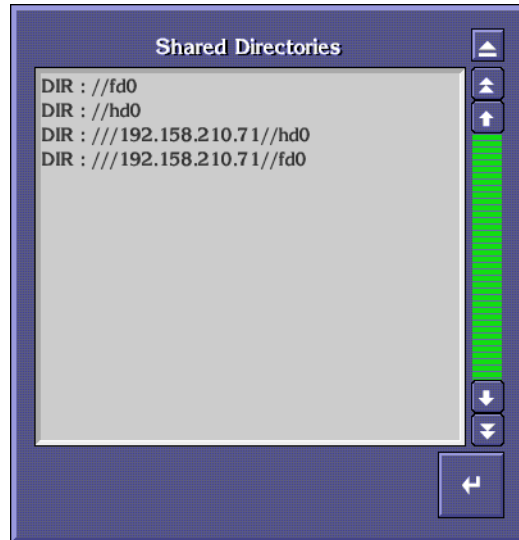


Double-clicking the `hd0` entry will display the contents of the controller's hard disk. Double-clicking the `IP number//hd0` entry will display the contents of your workstation's hard disk as demonstrated in Figure 108. To navigate back up the directory structure, double-click the two periods.

**Note**    NT workstations must have the guest account enabled (with no password required) and have a shared folder named `hd0`. The diskette must be named `fd0` and shared.

*Figure 108. Hard Disk Directory*



**5.** Choose the directory where you want to store the file. The path will appear in the Path field.

**6.** Click the **Export** button to export the CSV file to your target.

## Importing a Configuration

An efficient way to share configurations between sites and reduce the likelihood of data entry errors is to import an existing and tested configuration which has been exported in CSV format.

**1.** Create a dummy configuration using the Router Control application's System Configure screen to define a database having at least as many Maximum Sources and Maximum Destinations as the intended import file contains, for example, 128 x 128.

**2.** Click the **Modify** button to save the dummy database (optional).

**3.** Click the **Import** button and navigate to and select the actual CSV file you want to import.

**4.** Once you've imported the file, make any required changes to it.

**5.** Click the **Modify** button to save your imported settings.

**6.** Click the **Commit Changes** button to update the system.

# Route Screen Description

The Route Screen (Figure 109) enables Takes to be made between Sources and Destinations.

*Figure 109. Route Screen*
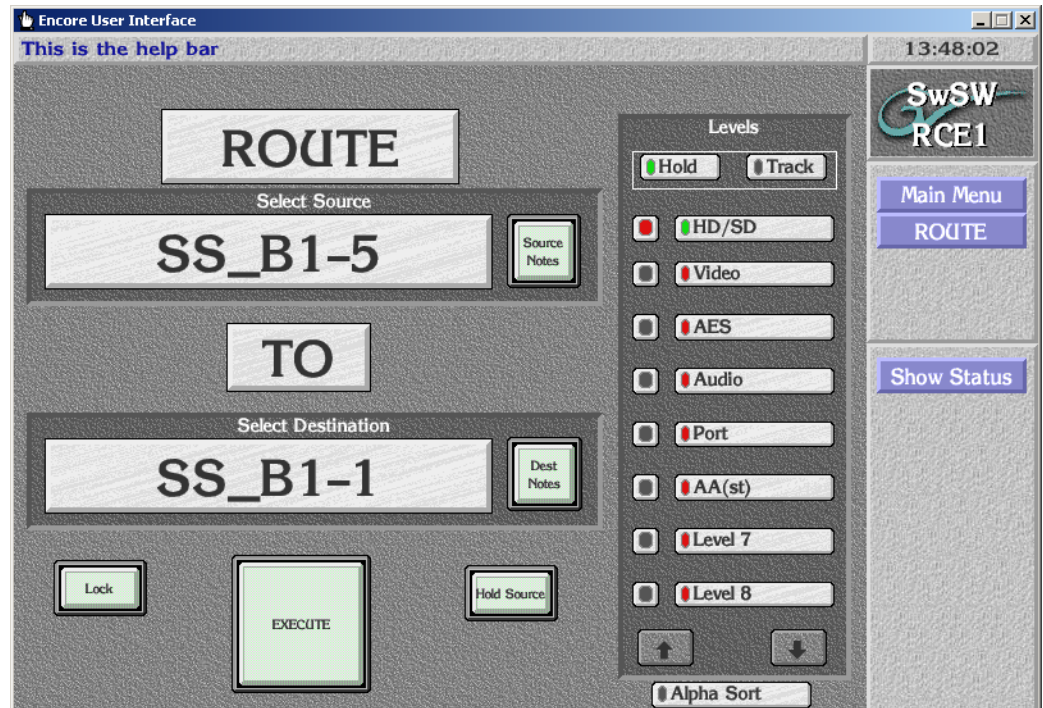


| | |
|---|---|
| **Select Source** | Allows a Source to be selected by name or number from a list. |
| **Source Notes** | Allows the entry of notes about the selected Source. |
| **Select Destination** | Allows a Destination to be selected by name or number from a list. |
| **Dest Notes** | Allows the entry of notes about the selected Destination. |
| **Lock** | Locks (indicator shows green) or unlocks the currently selected Destination. |
| **Execute** | Executes the chosen Take with the currently selected Levels. |

| | | |
|---|---|---|
| | **Hold Source** | When this button is green and a new Destination is selected, the Source is 'held' from the previous Take instead of the Source that is currently connected to the new Destination from being displayed. This feature enables many Takes that all use the same Source to be made quickly. |
| Levels | **Hold indicator** | When the indicator is green, the selected Levels in the Levels Area remain fixed for the next Take. |
| | **Track indicator** | When the indicator is green, the current Levels (and the Sources supplying these Levels) are automatically selected when the next Take after the current Take has been executed. |
| | **Level n indicator** | These buttons are used to specify the Level(s) to be used in a particular Take. |
| | **Up Down Arrows** | Pages up or down one screen of Levels per click. |
| Show Status | | Displays the Router Status Screen. |

## Making a Take

1. Click on the button directly below the Select Destination text and choose a Destination from the list window. The selected Destination is then shown on the button.

2. Click on the button directly below the **Select Source** text and choose a Source from the list window. The selected Source is then shown on the button.

3. In the **Levels** Area on the right of the screen, select the Levels that you want to Take by clicking on the long indicator buttons (i.e., the buttons that show the names of the Levels). Use the arrow buttons if necessary to scroll down to reveal more Levels. A green indicator signifies that a Level is selected, and a red indicator signifies that a Level is not selected.

**Note** A Destination must be selected prior to selecting the Levels to route, even if this means re-selecting a Destination. If a Take is executed, Levels are changed, and the same Take is executed again, the new Levels will not be taken.

4.  Use the small indicator buttons in the **Levels** Area to check if a Level is currently routed to a Destination for the selected Source. A green indicator signifies that the Level is routed for the selected Source, and a red indicator signifies that a different Source is routed to the Destination on this particular Level. Clicking on the small button when the indicator is red shows the name of the Source currently routed on this Level (this is shown below the **Select Source** text).

5.  Click on the **EXECUTE** button to make the Take.

**Note**    The **Hold Source** button (when it is green) allows the user to hold the currently selected Source when a new Destination is selected. This feature enables the same Source to be taken to a number of different Destinations very quickly.

## Router Status Screen

The Router Status Screen (Figure 110) shows the status of each Destination configured in the Router Control application. Arrow buttons are situated near the bottom of the screen to allow the user to scroll through the information.

*Figure 110. Router Status Screen*



| Dest | Lock | SDI | PAL | Audio R | Audio L |
|---|---|---|---|---|---|
| VTR 1 | | ‹Undef› | | | |
| VTR 2 | | ‹Undef› | | | |
| VTR 3 | | ‹Undef› | | | |
| VTR 4 | | ‹Undef› | | | |
| VTR 5 | | ‹Undef› | | | |
| VTR 6 | | ‹Undef› | | | |
| VTR 7 | | ‹Undef› | | | |
| VTR 8 | | ‹Undef› | | | |
| PDR 1 | | ‹Undef› | | | |
| PDR 2 | | ‹Undef› | | | |
| SERVER 1 | | ‹Undef› | | | |
| SERVER 2 | | ‹Undef› | | | |
| NET 1 | | ‹Undef› | | | |
| QC 1 | | ‹Undef› | | | |
| QC 2 | | ‹Undef› | | | |
| QC 3 | | ‹Undef› | | | |
| QC 4 | | ‹Undef› | | | |

**(Dest column)**    Fixed column which is always visible in this screen and lists Destinations by name.

**(Lock column)**    Fixed column which is always visible in this screen and indicates whether its Destination is locked.

| | |
|---|---|
| **Left arrow** | Scrolls columns 3-*n* one column to the left per click. |
| **Up Down Arrows** | Pages up or down one screen of Destinations per click. |
| **Right arrow** | Scrolls columns 3-*n* one column to the right per click. |

# Names Screen Description

The Names Screen (Figure 111) shows the names (short ID names with a maximum of 8 characters, and longer more meaningful names with a maximum of 16 characters) of the Sources or the Destinations that have been configured in the Router Controller. Aliases can also be up to 16 characters long.

*Figure 111. Destination Names Screen*
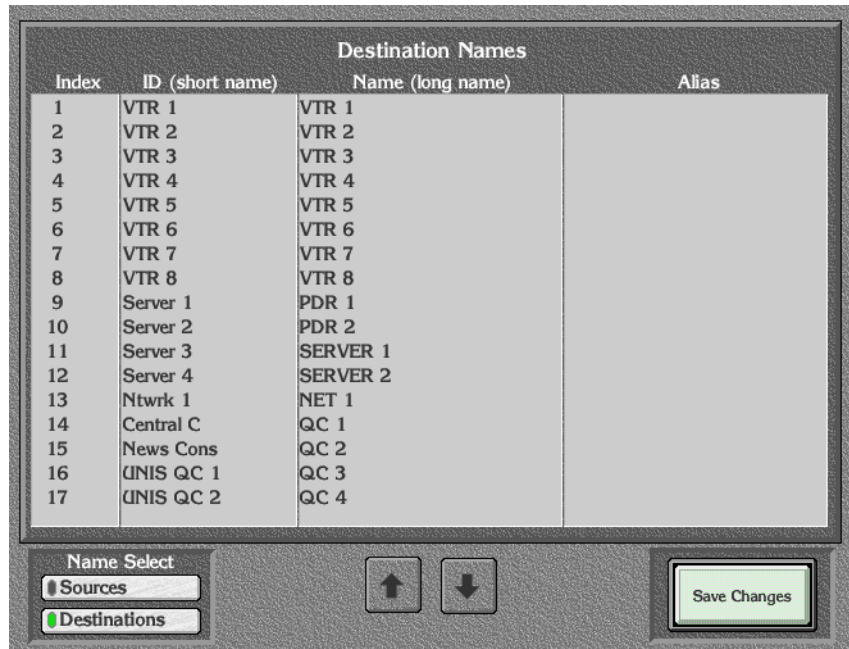


| | |
|---|---|
| **(Index column)** | Lists a number unique to the Destination or Source to its right. |
| **ID (short name) column** | Lists the short name for the Destination or Source. |
| **Name (long name) column** | Lists the long name for the Destination or Source. |

| | | |
|---|---|---|
| | **Up Down Arrows** | Pages up or down one screen of Destinations or Sources per click. |
| | **Save Changes** | Saves any changes that have been made to either the Source or Destination names. |
| Name Select | **Sources indicator** | When the indicator is green, the Names Screen shows the Source names. |
| | **Destinations indicator** | When the indicator is green, the Names Screen shows the Destination names. |

## Changing a Name

1. Select either Sources or Destinations by clicking on the **Sources** or **Destinations** indicator button in the bottom left corner of the screen. The screen will then display either the Source names or the Destination names (depending on your choice).

2. Use the arrow buttons if necessary to scroll through the index of names until you find the name that you want to change.

3. Click on the ID or long name that you want to change. Type the new name in the alpha/numeric keypad that appears on the screen. The new name is then shown in the index of names.

4. Repeat Step 2 and Step 3 until you have changed all the names that you want.

5. Click on the **Save Changes** button to confirm and register all the name changes.

# Naming Conventions

Follow the naming conventions in this section to ensure the best Encore functionality.

## Seven or Eight Character Names

Limiting names of Sources, Destinations, Levels, Salvos, Areas, control panels and other names intended for display on Encore hardware panels to 7 or 8 characters is strongly recommended. Names longer than 8 characters will be truncated and the extra characters will not appear to the panel operator. Names with 8 characters will also have its last character overwritten if a Breakaway condition exists.

If names exceed 7 or 8 characters, they should be carefully selected so that the first characters are always unique for a given item. Otherwise ambiguity, confusion and operator error are likely to result.

## Spaces in Names

While it is permissible to use a space character in some names, we advise against their use for usability and compatibility reasons.

**Note**    Salvo keypad and file names must not contain spaces.

## Upper Case Characters

To ensure consistency, you may want to always use UPPER CASE characters for names. It is possible to use upper and lower case letters to indicate separate words/abbreviations in a name LikeThis. However, some screens may revert to display only upper case characters, so this practice may not always be appropriate.

## Panel and Template Names

All panel and template names *must* be unique, and no panel name should be the same as a template name or vice-versa.

## RCL Client Names

All RCL clients (up to 17 are allowed) *must* have unique names to prevent unpredictable behavior.

RCL Client names must not begin with any form of "com."

## Avoid Special Characters

The following special characters should not be used, especially in Salvo names:

/ \ ; : , * ? " < > | ,

# Options Screen Description

*Figure 112. Router Option Configuration Screen*
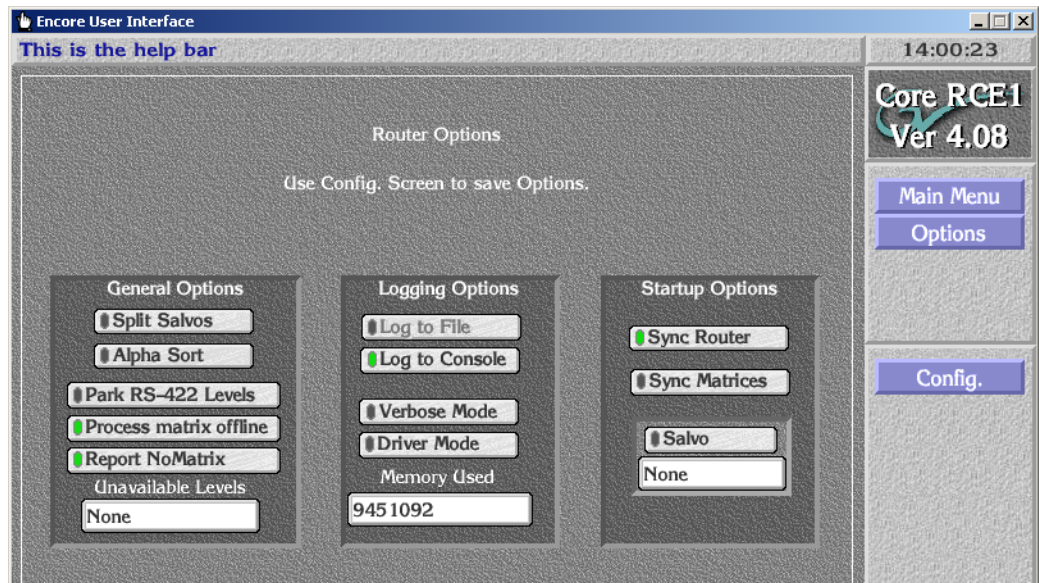


**Split Salvos** — When this feature is enabled, each Salvo element is sent as a separate connect message. For larger Salvos, Takes may occur across multiple frames.

When this feature is off, and the protocol being used supports Salvos, the Salvo route requests will be stored and then issued simultaneously, ensuring Takes occur at the same time. This is particularly effective for slow serial communications. If the protocol does not support Salvos, separate Salvo elements will be sent regardless of how this parameter has been set.

**Alpha Sort** — When enabled, Alpha Sort will be the default order used to display Sources and Destinations in their list windows. When disabled, the display order is by Source and Destination index number.

**Park unavailable Lvls** — When enabled, if a Data Level assignment exists and a multi-Level Take involving it fails, the Data Level Destinations will be parked.

**Process matrix offline** — When ON, displays the Report NoMatrix button.

**Report NoMatrix** — When ON a No Matrix condition is reported as **NoMatrix**.

When OFF a no Matrix conditions is reported as **Undef**.

<table>
<tr><td>**Unavailable Levels**</td><td>Controls Encore system behavior when mis-matched level Takes are performed. One example is taking a video only single level source (e.g. camera) to a video/audio level destination (e.g. DDR).

**None**- System behavior prior to v1.7.4 software. The Take will be performed, but an error message will be displayed for one half second that can obscure panel display source status reporting.

**Park Levels** - The Take is performed, and unavailable levels will be parked.

**No TLM Error** - Same as None, except the error message is suppressed.</td></tr>
</table>
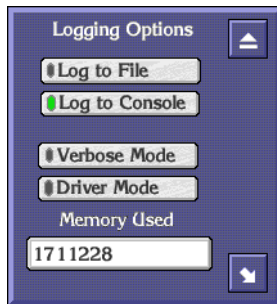
**Logging Options**

To enable logging, click this button to choose the type of logging. The logging option indicator buttons are toggles; click an option indicator button to reverse its state. In Windows NT you can log to a file and/or the console and determine whether the log file(s), if any, is verbose and/or driver mode. Selecting either of the top two logging options — they're not mutually exclusive — also lights the Logging indicator button. Finally the Memory Used field displays the amount of memory the Router Control application is using.

CAUTION - Logging Router or Tie-Line Manager activity impacts performance. Logging to the terminal/console slows performance somewhat. Logging to a file affects system performance considerably and can fill up a hard disk quickly. Except during diagnostic procedures, we recommend disabling logging.

**Sync Router**

Toggle button. When the indicator is green, the Router Controller (on start-up) synchronizes itself to the physical state of the router matrices that it is controlling by reading back the Crosspoint status from all controlled matrices.

**Sync Matrices**

Toggle button. When the indicator is green, the Router Control application sends its Crosspoint maps to all controlled matrices. This synchronizes Crosspoint status and the matrices with the Router Controller.

**Salvo Button**

When the indicator is green, the Router Controller (on being booted up) sends the Salvo named in the Salvo field below this button.

**Salvo field**     Lists the Salvo to be sent on Router Controller boot up. Clicking on this window displays the Filer-Fax – this allows a Salvo to be selected from the Sharer Salvo database.

# Database Validation

The Router Controller includes a database validity feature.

A **Validate DB** button indicates the current state of the Router database and can be used to regenerate the database, which can correct some problems. This button is available on the Router Controller application Config, Channels, and Physical Matrix screens.

## Database Validity Indicators

The **Validate DB** button has three states:

- **Normal** - Uncolored background: Indicates the database has no discrepancies in the configured Source and Destination configuration.

- **Warning** - Yellow background: Indicates minor inconsistencies are present in the configuration. For example, a particular Source or Destination may not have a valid connector.

- **Invalid** - Red background: Indicates the database has serious inconsistencies within the internal data and references. In this state it is recommended to take action to resolve the situation (see *Invalid Router Database Resolution* below).

## Invalid Router Database Restrictions

When the router configuration is invalid the following actions are not allowed.

- Increasing the start input and start output of the segment(s) in the Physical Matrix screen.

- Decreasing the end input and the end output of the segment(s) in the Physical Matrix screen.

- Adding or deleting elements in the Logical Matrix screen.

- Changing I/O connector or Level Mapping in the Sources and Destinations screens.

## Invalid Router Database Resolution

**1.** Take the Router Controller offline.

**2.** Click on the **Validate DB** button. The Router Controller will regenerate its internal references and display the Sources and Destinations lacking proper connector numbers.

You can click on a listed Source or Destination to go directly to the Source/Destination screen and make a correction.

**Note** If more than 100 Sources or Destinations have invalid connector numbers, only the first 100 will be displayed.

**3.** The **Validate DB** button may turn Yellow at this time if the Router Controller was able to regenerate all its internal references.

**4.** With the indicator colored Yellow, you can now correct or reconfigure the Source and Destination connectors. Click on the Router Controller Physical Matrix **Connectors** button to check the validity status of all the configured Sources and Destinations. Sources and Destinations without connectors are shown as **Not Associated** and Sources sharing connectors are shown with an * (asterisk). These statuses can be used to identify and correct any discrepancies.

The **Validate DB** button returns to the uncolored normal state only when all Sources and Destinations have valid connector numbers on all levels.

## No Matrix Indication

The Router Controller (and Control Panel Servers) running Encore 1.7.3 and newer software can immediately report the loss of communication with a matrix and update Destination and level statuses.

**Note** It is not possible to detect loss of communication with certain serially controlled Matrices.

Previously loss of matrix control would only be discovered when a Take is attempted on the affected Destinations and levels. The Take would fail and only then would the reported status change from its last known state to No Xpt.

**Note** The Router Controller can take varying amounts of time to detect a Matrix going offline. A CPL protocol controlled Matrix (such as Grass Valley Concerto or Trinix) can detect loss of communication within 3 seconds. An NP protocol controlled Matrix (NP Matrix) can take 2 to 30 seconds to detect loss of communication.

## No Matrix Status Reporting

If a Matrix hosting the active tally level of a selected Destination has lost communication with the Router Controller, the No Matrix status is updated in the following ways:

• All control panels with displays show **NoMatrix** or **Undef**. Panels without displays (such as the 48B) will low tally their Destination select buttons. GSC panels report this condition by flashing their LEDs. Source Takes cannot be performed on panels that are in this condition.

• RCL Server also reports **NoMatrix** to all subscribed clients.

## Selecting No Matrix Status Text

To be notified of Matrices going off line and select what status text is displayed (**NoMatri**x or **Undef**):

**1.** Log on to the Router Controller OUI and go to the **Options** screen.

**2.** Turn ON the **Process matrix offline** flag.

    • Turn ON the **Report NoMatrix** flag to see status as **NoMatrix**.

    • Turn OFF the **Report NoMatrix** flag to see status as **Undef**.

Turn OFF the **Process matrix offline** flag to see the previously taken Source as the status of Destinations (the previous system behavior). shows these flags on the Router Controller Options screen.

# Output Monitoring

**Note**    Before attempting to configure the Encore for monitoring, monitor wiring and switch settings for the particular router must be understood and completed. Please refer to the installation manual for the specific router for more information.

A monitoring system is used to check switcher performance by switching the output signal of interest to a quality control station. When configured for output monitoring, an Encore 48B, XY, or PMB control panel will automatically switch its controlled Destination to the Monitor output. See .

*Figure 113.  Router with single monitor output (e.g. Concerto).*
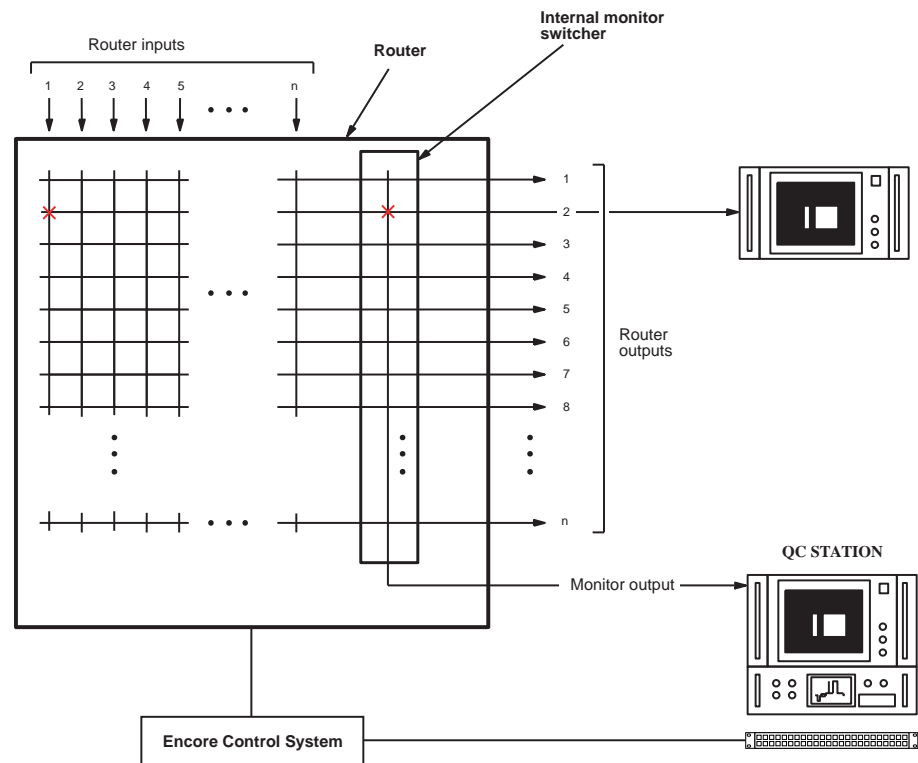


In this example, the 48B's Destination output 2 is connected to the output monitor; consequently switching input 1 to output 2 will display input 1 on both output 2 and the monitor output.

BPS and LRP control panels cannot be used to control a monitor output.

## To Configure and Use Destination Monitors

**1.** Using the Router Control application's System Configure screen set the maximum Sources and Destinations to be configured. To configure Destination Monitor(s) increase the number of Destinations by the number of Destination Monitors to be configured. See Figure 114.

*Figure 114.*
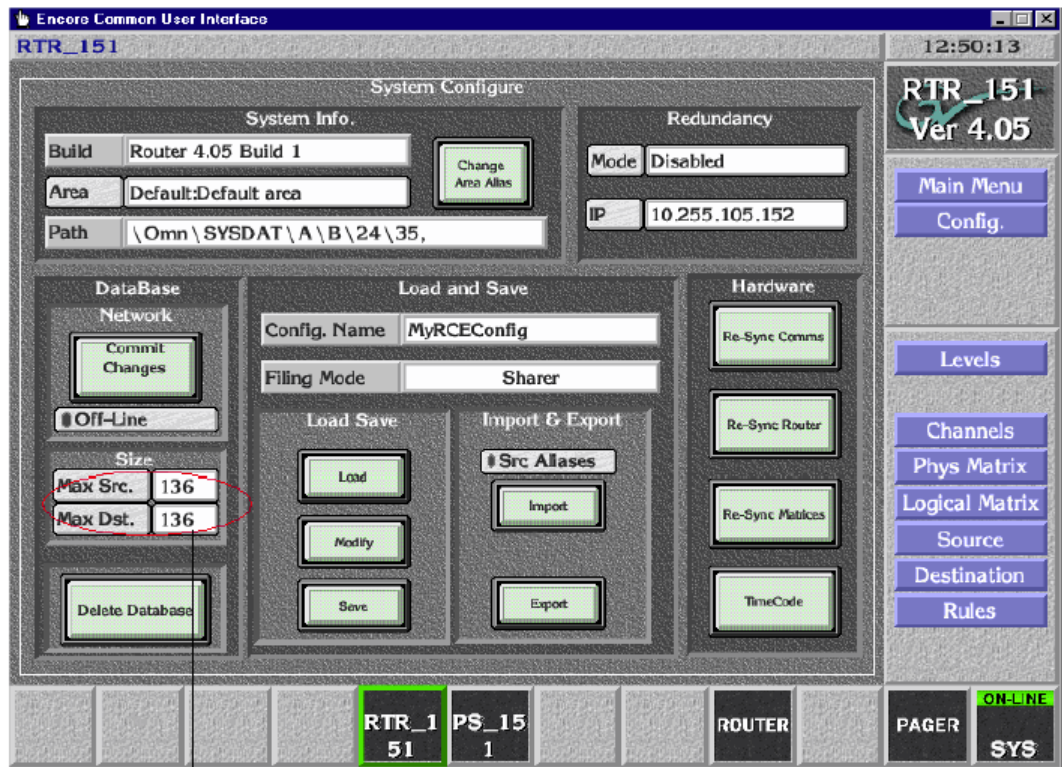


This illustration assumes we want to configure 128 Destinations, 128 Sources, and eight Destination monitors. In this case the number of Destinations is increased by eight from 128 to 136 to incorporate the eight Destination monitors. The number of Sources is also increased by eight to maintain a symmetrical configuration.

**2.** While configuring the Physical Matrices enter the maximum number of monitors intended to be configured for this matrix type. See Figure 115.

*Figure 115.*
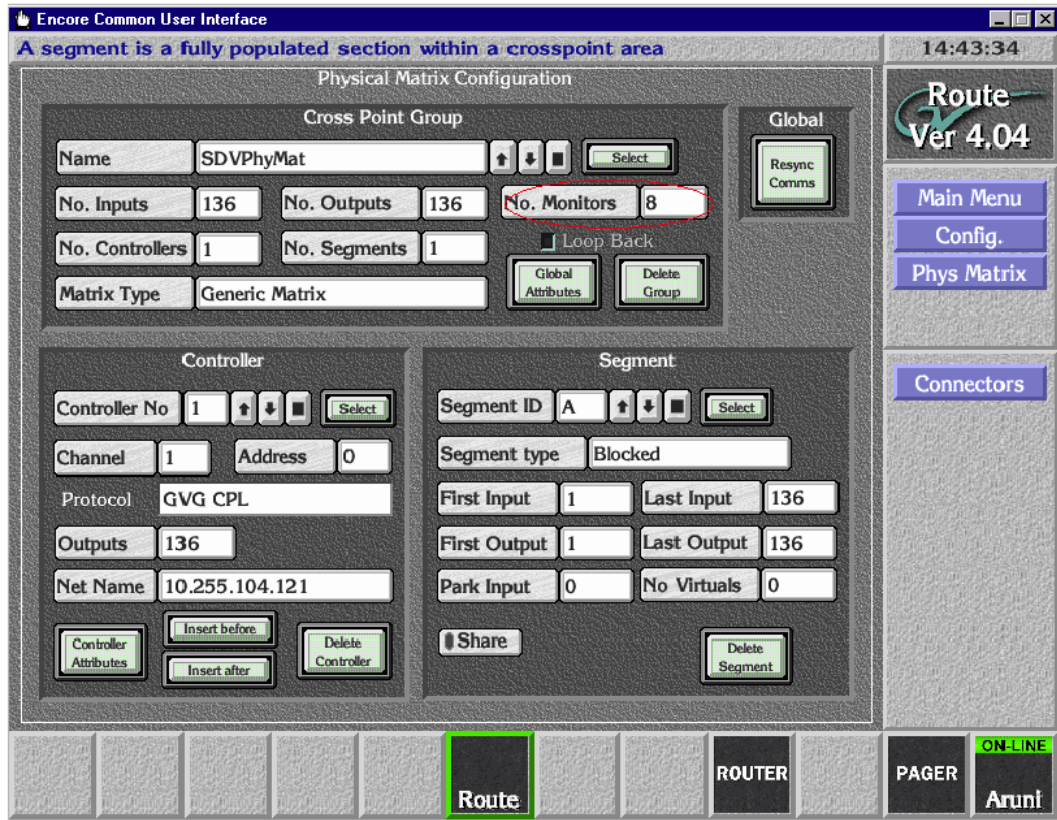


The number of monitor outputs supported by various matrix types is shown in Table 23.

*Table 23.  Matrix Types and Supported Output Monitors*

| Matrix | Output Monitors |
|--------|-----------------|
| Concerto | 1 |
| Trinix | 4 |
| 7500 NB | 8 |
| 7500 WB | 4 |
| Apex | 1 |

**3.** On the Destination Configure menu, select "Destination Monitor" as the Type for each output to be used for monitoring. See Figure 116.

*Figure 116.*
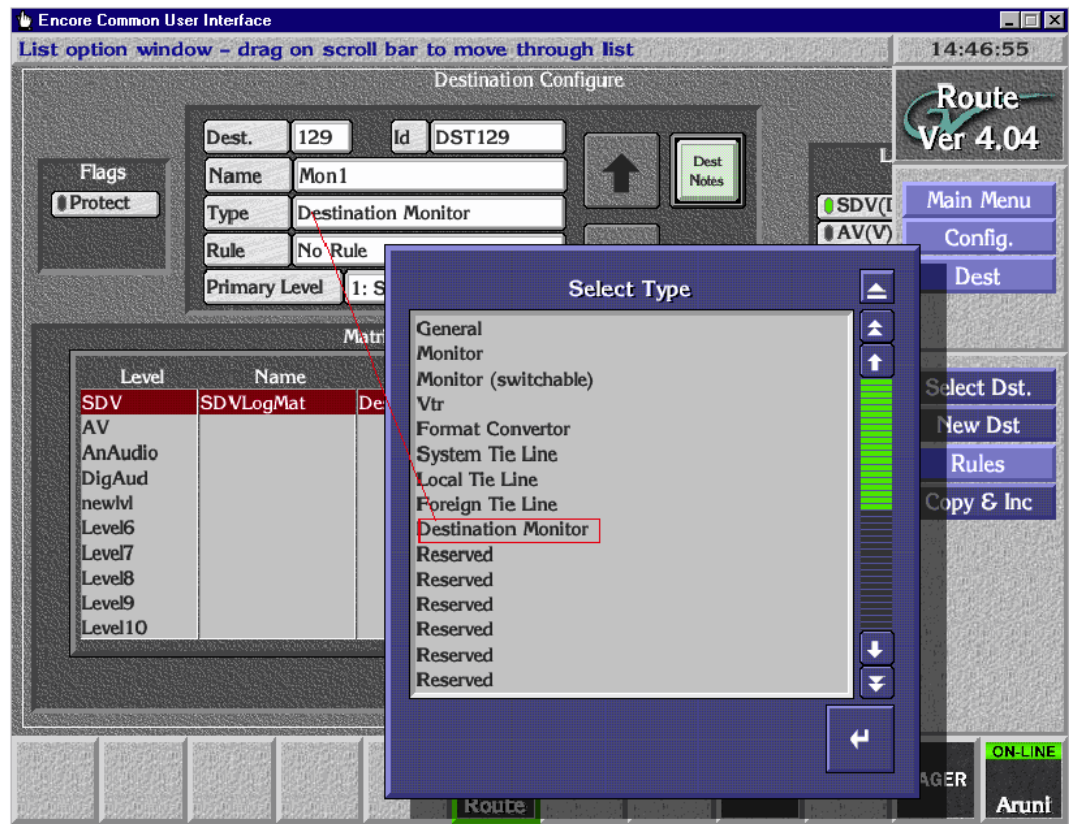


4.  Set the Levels for these monitor Destinations.

5.  Click, in order, **Modify**, **Re-Sync Comms**, and **Commit Changes** to update the database and broadcast the availability of the Destination monitors configured in the system.

6.  Since PMB panels control eight Destinations, eight Destinations can be monitored at a time. When the DstMonitor/Page attribute of the PMB panel configuration is selected, a Monitor Page screen is displayed. This allows each bus to be tied to a Destination monitor. See Figure 117.

*Figure 117.*
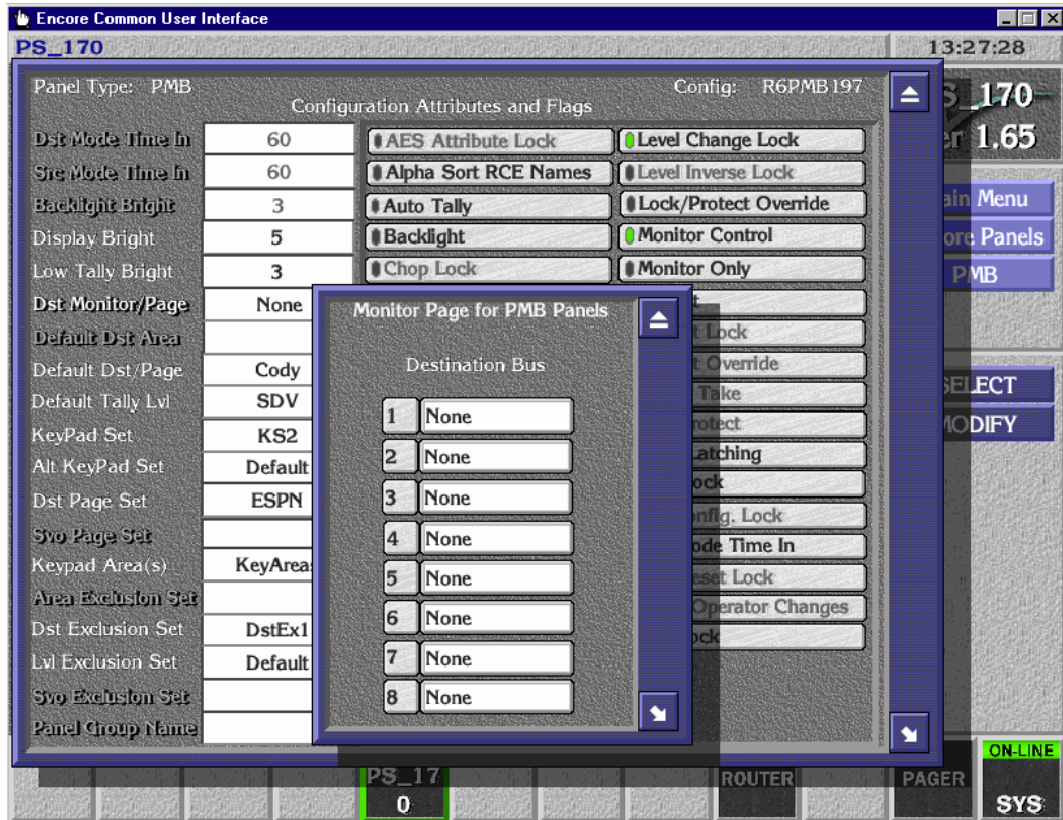


7. Since XY and 48B panels can control a single Destination at a time a single Destination can be monitored, the attribute DstMonitor/Page can be assigned to the configured Destination Monitor. See Figure 118.

*Figure 118.*
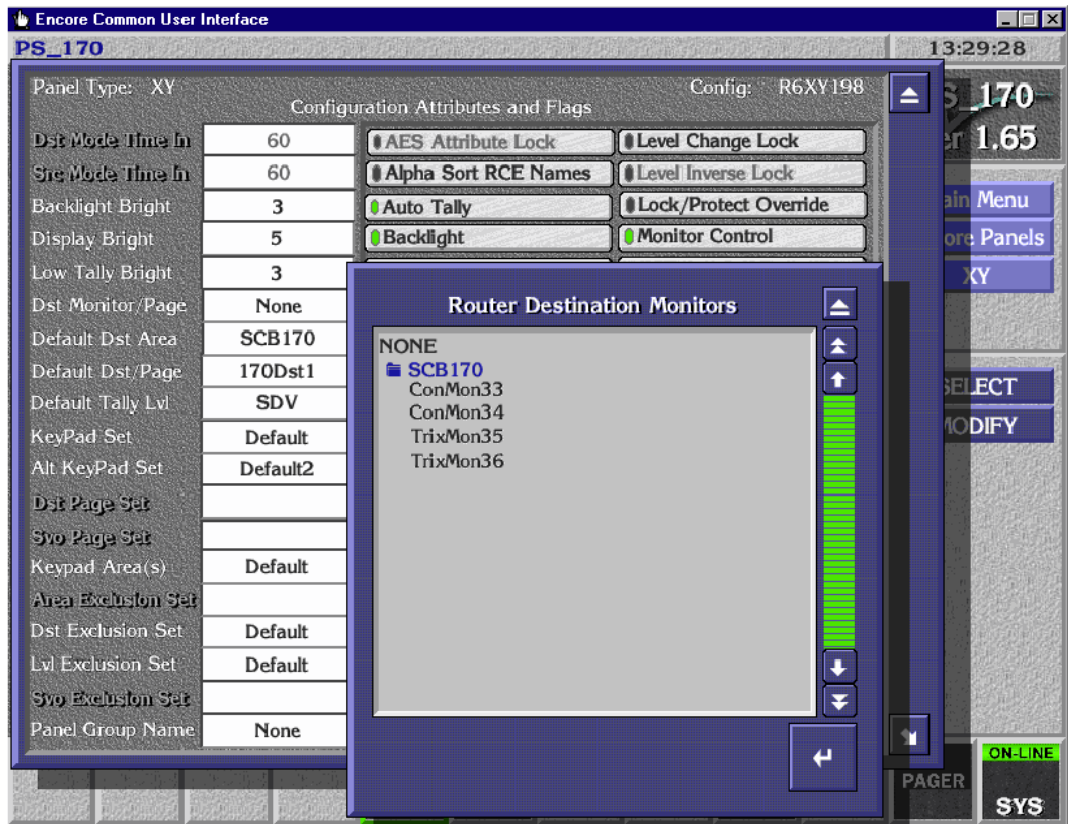


8. For the hardware configuration of the Destination Monitors for the Matrices please refer to the appropriate installation manual.

# Native Protocol Matrix Driver

## Overview

Encore supports a Native Protocol Matrix Driver (NP Matrix). This matrix type allows an Encore Router Control Engine (Encore RCE, acting as the Local System) to interact with another control system (referred to as the Remote System) as an automation client. The Local System is then able to control cross points belonging to the Remote System.

The Remote System can be any control system that supports a Native Protocol server. An SMS7000 (software release 7.3 or higher) is one such system, and the main purpose of the NP Matrix is to allow an Encore system to control legacy matrices via a legacy control system like the SMS7000. However, an NP Matrix can also be used to make one Encore Control System communicate with another Encore Control system (which

could be located in a different site) and switch crosspoints on the second control system.

The NP matrix can be used to issue Takes, Protects, Unprotects, and Take Monitor commands to the Remote System. It displays the current status of the Remote System at any point of time. In case of loss of connection to the Remote System, the NP Matrix attempts to reconnect automatically. If the connection cannot be regained, the user will be notified when Takes, Protects, or other operations are attempted.

## Features

- The NP Matrix facilitates Encore communication with legacy matrices via the SMS7000 control system. The NP matrix driver also enables matrix control of matrices hosted by other Encore systems.

- The Encore control system (the Local System) identifies the cross points controlled by the Remote System by either their names/indices as configured in the native control system. Each of these names or indexes can be given a new name in the remote control system. The translation from Local System name to the Remote System name is done automatically by the NP matrix driver.

- The Local System can be configured to identify the Remote System's Sources and Destinations either by name or by index

- The Local System can control the Sources and Destinations on the Remote System, either on a Level by Level basis or on an all Level basis.

- The NP Matrix configuration details including the native to local name/index translations are saved persistently.

- Crosspoint changes made from the Remote System (SMS7000/Encore) are received by the NP matrix and the same is updated on the panels, automation clients, LRPs connected to the Local System. Note that the Local System polls the Remote System for changes every 5 seconds. Consequently there can be a tally latency (on the Local System) of up to 5 seconds when a Take is executed on the Remote System.

- The NP matrix driver facilitates the following operations on the Remote System.

  - Cross point control (Takes).

  - Protect / Unprotect a SMS7000 Destination.

  - Take Monitor.

  - Refreshing Connection and Protect.

# NP Matrix Configuration

1. Using the Encore OUI launch the Router Control application (Figure 119) on the Encore system (this will be the Local System).

*Figure 119.*
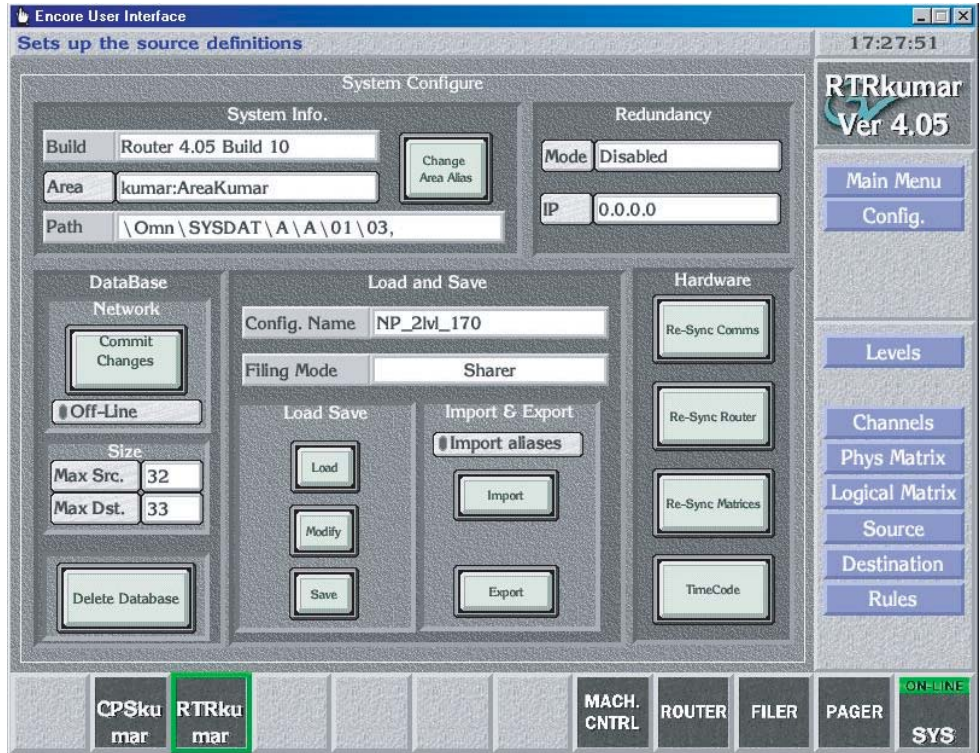
**2.** Navigate to the **Levels** button and select it, configure the required Levels
(Figure 120).

*Figure 120.*
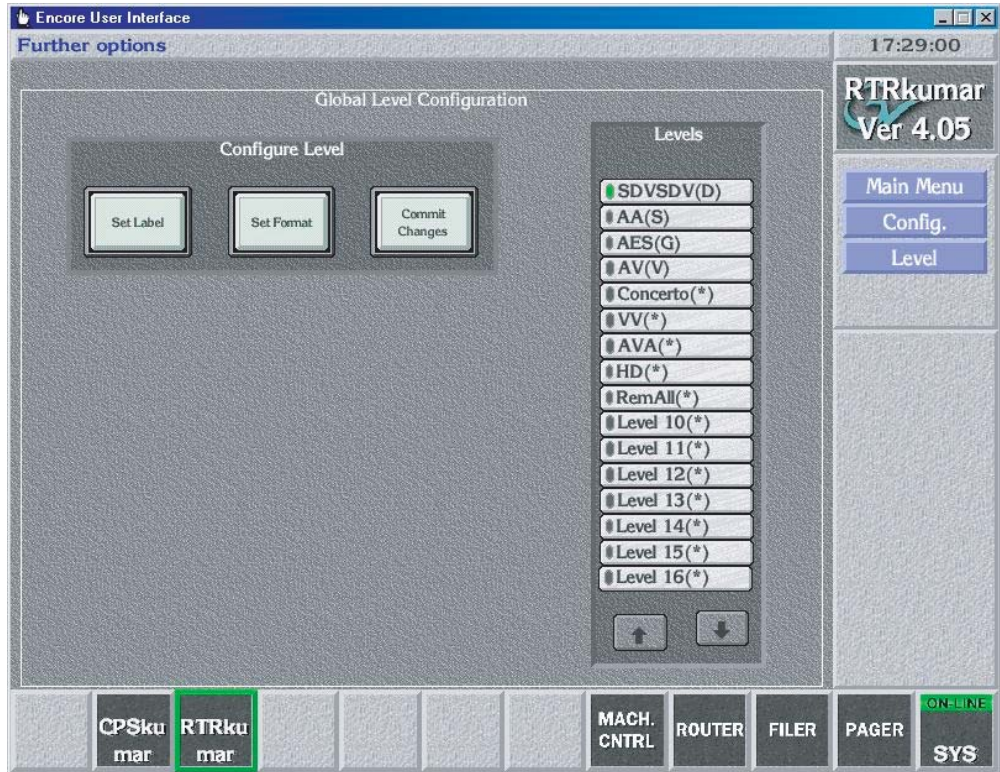


**3.** Click on the **Config** button.

**4.** Navigate to the **Channels** button and select it. Choose the protocol as either **GVG NP (Name)** or **GVG NP (Index)** (Figure 121). Press the **Initialize Channel** button.

*Figure 121.*
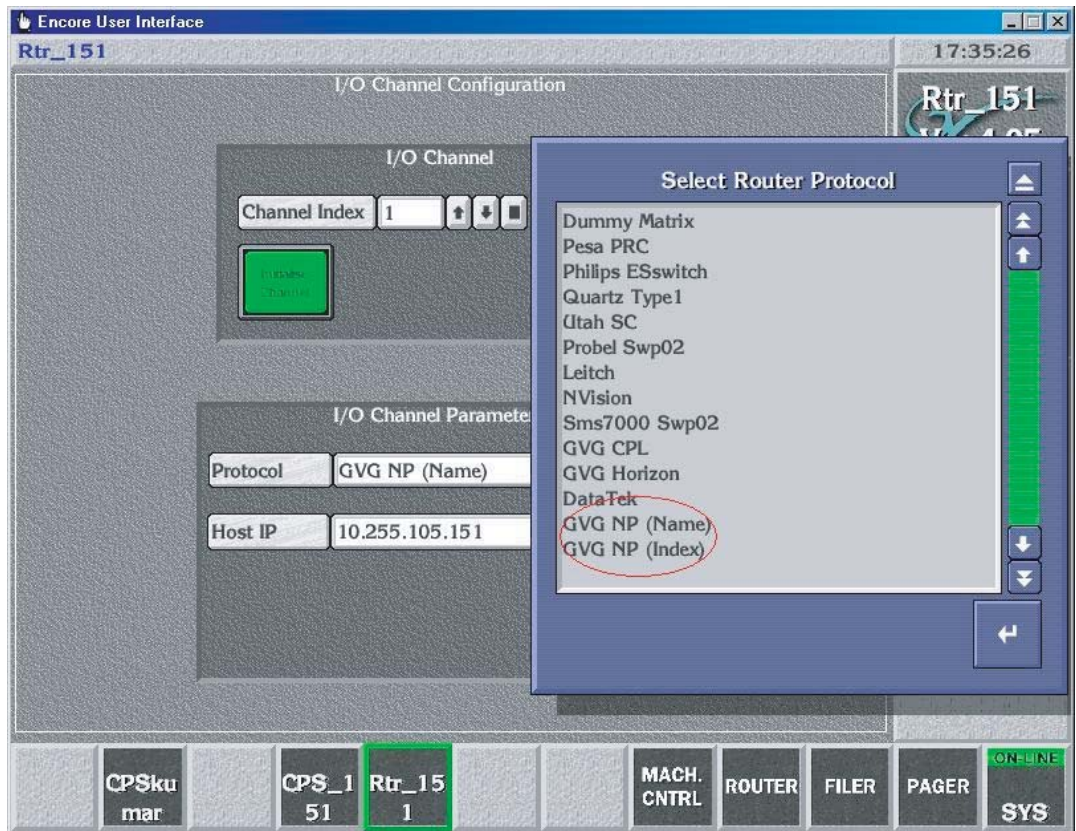


**5.** Click on the **Config** button.

**6.** Navigate to the **Phys Matrix** and select it. Navigate to the **Cross Point Group** section, set the required fields like Name, No. Inputs, No. Outputs, No. Monitors, No. Controllers, No. Segments. While choosing the Matrix Type, choose **NP Matrix**.

**7.** Navigate to the Controller section, choose the Channel as **GVG NP (Name)** or **GVG NP (Index)** (Figure 122).

*Figure 122.*
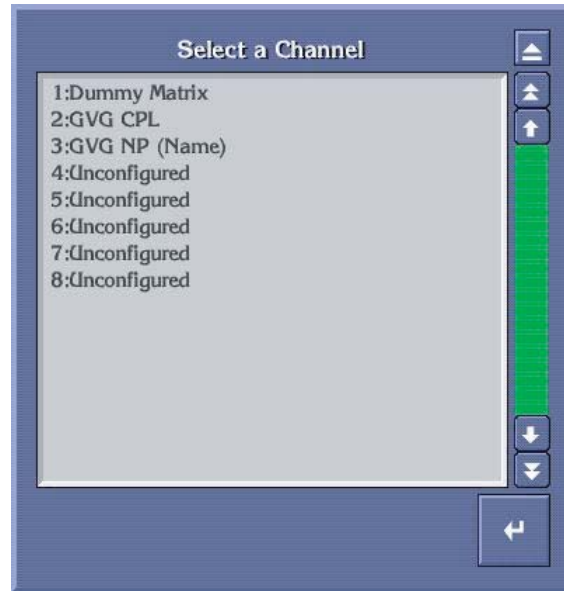


**8.** Specify the Address as the Level that exists on the remote system, for which the Source(s)/Destination(s) are to be controlled. This field accepts hexadecimal values only. If we want to control the Sources and Destinations on Level 10 of the Remote System then we need to enter 'a' as the address. Values of 0 and FF are used to indicate all Levels. In the Net Name field specify the IP address of the NATIVE CONTROL system (SMS7000/Encore).

Matrix size differences between the SMS7000 (remote) and the Encore RCE must be accounted for in the configuration. In order to ensure matrix size matching is sufficient, it is recommended that users configure the Encore RCE physical matrix and segment size to be 1024 maximum size. Users must be careful to ensure that only the matrix and segment sizes are increased and not the number of Sources and Destinations.

**CAUTION** The number of Sources and Destinations on the RCE should be determined by actual customer needs on the Encore RCE configuration side. Unconfigured Sources or Destinations will result in blank name sets. Blank Name sets can adversely affect automation systems retrieving name sets (some automation systems will fault if a blank name is received). Also blank names can potentially slow down panel search operations to filter through these additional unconfigured Sources or Destinations

**9.** Navigate to the Segment section and specify the appropriate values for all the required fields.

*Figure 123.*
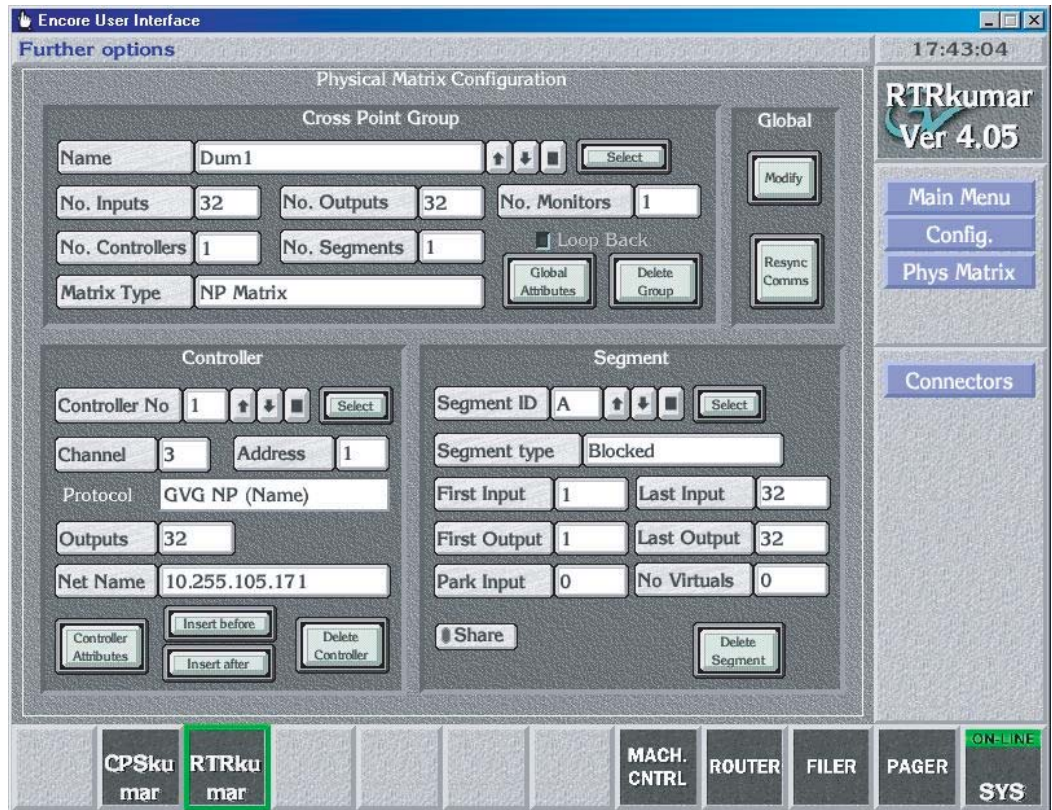


**10.** Click on the **Config** button.

**11.** Navigate to the **Logical Matrix** and select it. Configure the appropriate Levels for the configured physical matrices.

*Figure 124.*
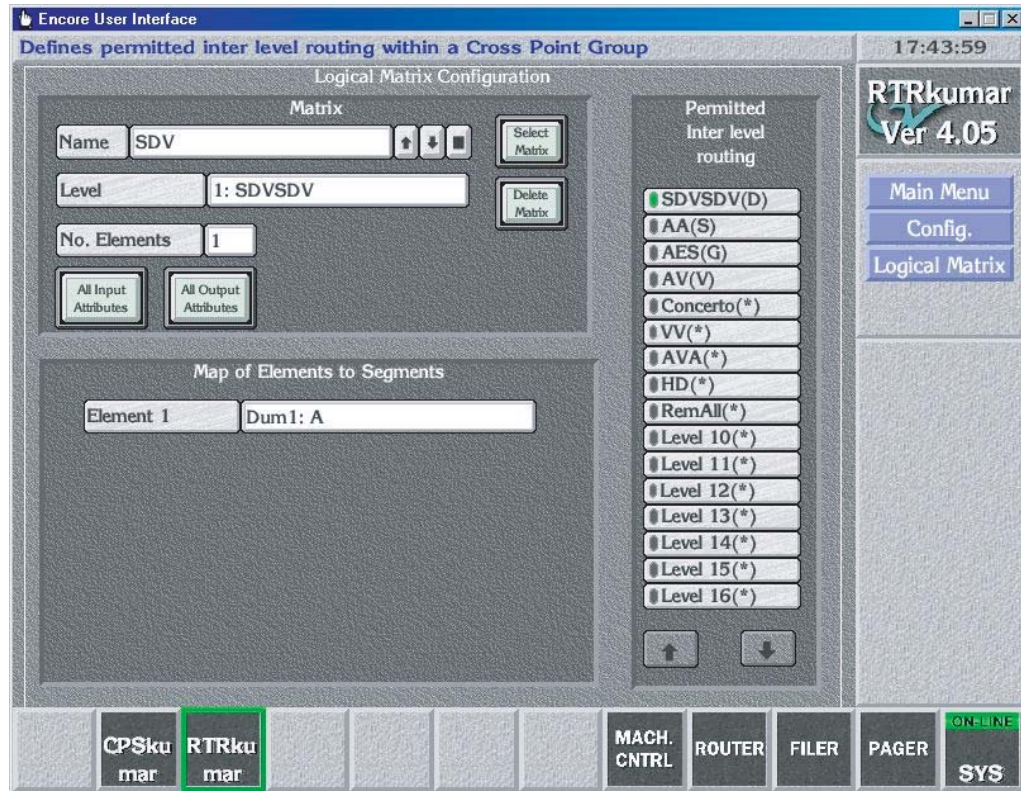


**12.** Step 6 through Step 11 can be repeated to create more Cross point groups and logical matrices. Note that, even if "all level" is chosen for the Remote System (by specifying the address field as 0 or 255), each of these logical matrices map on to a single Level on the current router engine (that is the Local System).

Note that, a single Encore router can be configured with multiple cross point groups (physical matrices), each connecting to a different Remote System (that is multiple SMS 7000 systems).

**13.** Click on the **Config** button, then click on the **Modify** button, and then click on the **Re-Sync Comms**, **Re-Sync Router** and **Re-Sync Matrices** buttons respectively. The Remote System must be running and have Ethernet connectivity for these operations be successful.

**14.** Navigate to the **Source** button and select it. Enter appropriate values for the ID and Name fields. Note that, all panels, automation clients connected to the this Control system will use the ID and the name specified here.

**15.** Navigate to the **Matrix Allocation** section. Select the appropriate Name and Type. While selecting the I/O value, the list of remote Source names is popped-up. Select the remote Source that has to be associated with the local Source. The **Copy & Inc** button can be used to fill in the rest of the Sources to be configured if appropriate. Click on the Config button.

*Figure 125.*
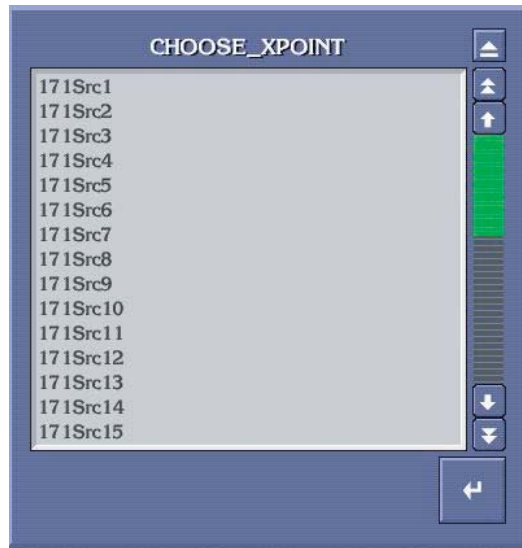


*Figure 126.*
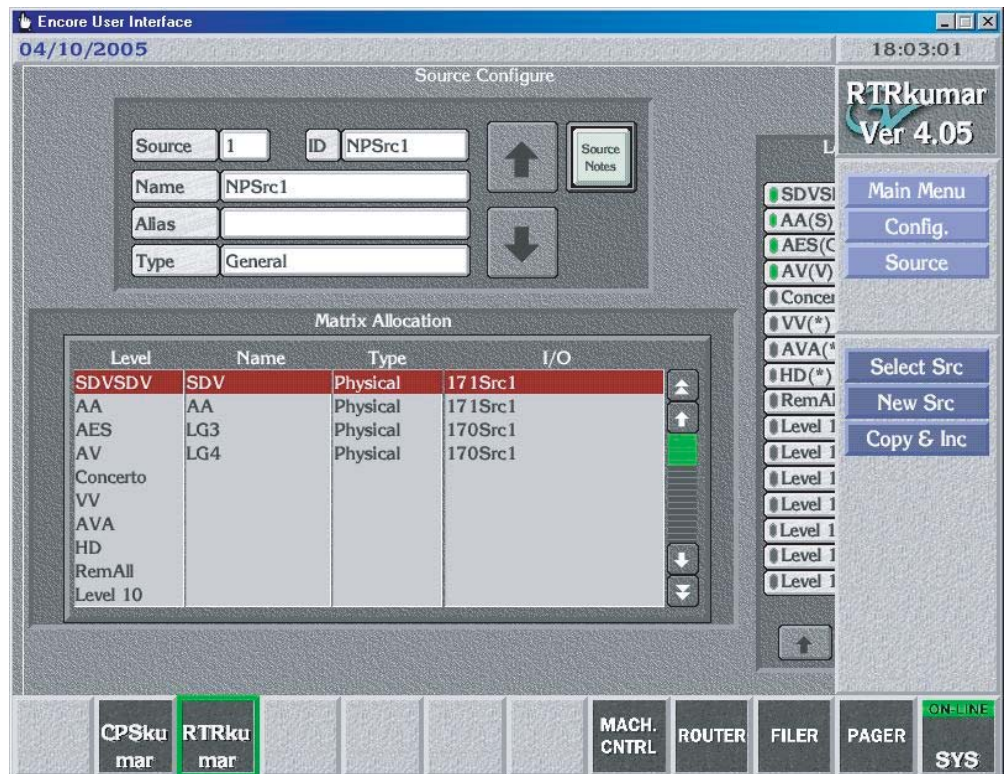
16. Navigate to the Destination button and select it. Follow the same procedure as used above for Sources. Enter appropriate values for the Name, id and Alias fields. Navigate to the Matrix Allocation section and Select the appropriate Name and Type. While selecting the I/O value, the list of remote Destination names is popped-up. Select the remote Destinations from the pop-up menu to be associated with the local Destination.

17. Click on the **Config** button, and then click on the **Modify** button.

18. Click on the **Main Menu** button. Navigate to the **Route** button and select it. Perform a few Takes and verify the crosspoints change on the remote system.

*Figure 127.*
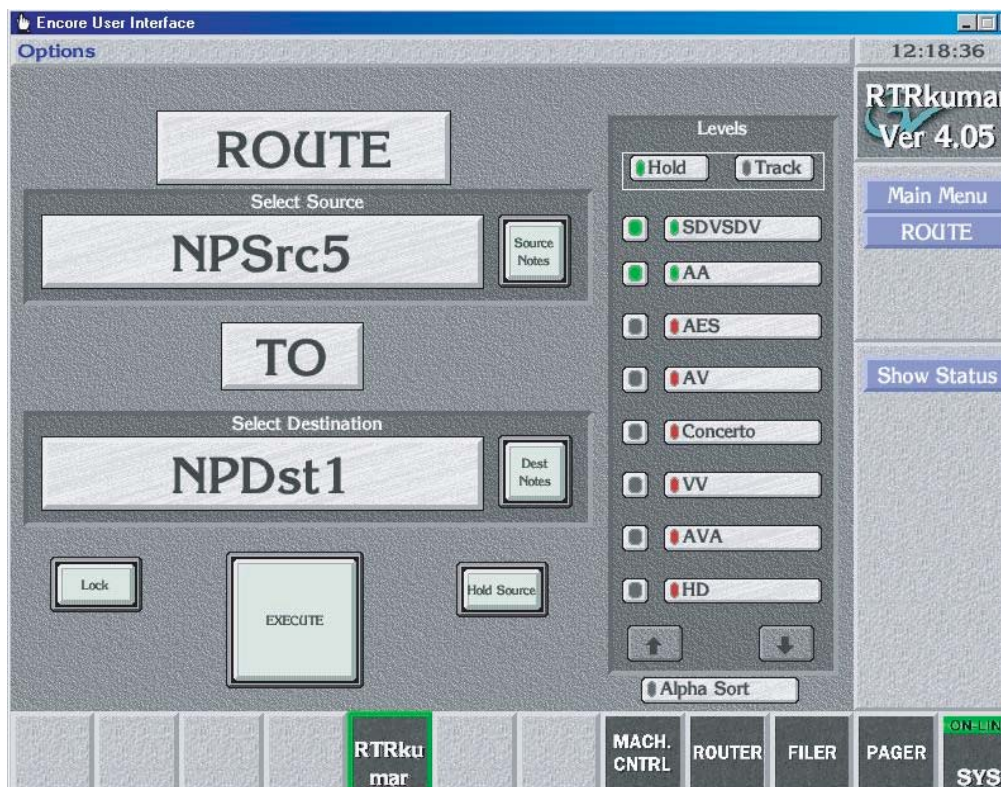


## Redundancy

For redundancy, enter the primary IP address in the Net Name slot and the contiguous IP address is considered as the secondary IP address i.e. the secondary MCPU IP address is the primary IP address +1, the same as already done for CPL matrix controllers. The connection is in the fail-over mode.

This NP matrix driver identifies connection loss to the SMS7000 when an operation is requested or data is read back from the server. If the NP matrix driver is configured for redundancy, when a connection loss occurs, con-

nection is then established with the redundant server. This is transparent to the user. If the driver fails connecting to the redundant server, it returns an error.

## Protect and Unprotect

Native Protocol supports only Protects & Unprotects. (NP does not support Soft Locks, Hard Locks, Force Unlock/Unprotect, Lock/Protect Override.) Protects can be performed on individual Levels.

The Protects issued to the SMS7000 from Encore are retained by the SMS7000 so long as the communications link between the two systems is active.

A SMS7000 issued Protect cannot be unprotected or overridden by Encore. A SMS7000 issued Protect must be removed by the SMS7000 issuing device.

An Encore issued Protect to a SMS7000 controlled Destination can be unprotected by a SMS7000 GUI or Maintenance Interface or any other Native Protocol client. The encore issued Protect can also be overridden by the GUI or SMS7000 control panels configured with Protect Override. Otherwise an Encore issued Protect would normally be removed by the Encore issuing device or Encore control system.

## Monitor Control

The NP matrix driver provides support for monitor control of the SMS7000 Destination. Only one default monitor is supported at the SMS7000 end.

# *Control Panel Configuration*

## Overview

The Control Panel Server application manages control panel operations, and is used to configure Encore system control panels. As described earlier (see *Client/Server Architecture* on page 26), Encore system control panels operate using a client/server approach.

The Control Panel Server application also has an embedded RCL Server, which supports third party automation systems and other external control mechanisms.

### Control Panel Configurations

The configuration of a particular control panel defines that panel's behavior. For example, the panel configuration determines which Destinations and Levels a panel can control, which buttons perform which functions, and how the control panel accomplishes other operations.

Template files are available that can be used as a starting point for panel configuration. When a new control panel is added to an Encore system, it automatically receives configuration information from a default template for that type of panel. This configuration can then be saved with the name of that panel, and be modified to change the behavior of that panel. That configuration is then used by that control panel, unless it is modified or a different template file is loaded to that panel.

### Control Panel Defaults (Factory and Facility)

Encore systems ship with factory default control panel templates. This allows a control panel to be taken out of its box and used immediately.

Encore systems support different control panel default templates. The factory defaults cannot be edited by the user. Custom templates can be created for each type of panel, and you can specify these defaults are to be used when a new panel of that type is added to the Encore system.

**Note**        Different Encore software versions may have factory panel default files with different settings, resulting in different behavior for new panels added to a system, depending on the version of Encore software being run.

## Factory Default Templates and Areas

Control panel factory defaults are based upon the default Area (Area 1) configuration. Areas create hierarchies within the Encore Control System which makes it easier to group Sources and Destinations in a large system. The default Area is where control panels find their defaults. If Area 1 has been configured with Sources, Destinations, and Levels, then the control panels will operate using the Area 1 defaults. Once an Area is defined, an Area prefix is automatically assigned to each Source and Destination in the Area by the router engine. The Area prefix is part of the system name and can be displayed on certain panels. Typically, in most installations, a single Area is used.

If multiple Areas are used at a facility, some or all of the control panels may need to be re-configured before they can be used.

## RCL Server

The RCL (Router Control Language) server can be configured to allow control of an Encore system from an external entity (like an automation system). This is accomplished by allowing the external system to appear as though it is a control panel, allowing it to send commands to route Encore system Sources to Destinations. See *RCL Server Application* on page 256.

# Control Panel Server Application

The Encore Control Panel Server application can configure and control up to 127 Encore Panels (this includes hardware panels and soft panels).

The Control Panel Server is a remote application. After logging on, click on a blank button on the bottom of the Encore OUI and select the desired Control Panel Server application from the list. The Control Panel Server Main screen will appear (Figure 128).

*Figure 128. The Control Panel Server Main Screen*



The Menu Bar on the right lists categories of control panels, and also has buttons to allow configuration of the Control Panel Server and RCL Server applications themselves.

## Panel Server Configuration Screen Description

The Panel Server Configuration screen (Figure 129), accessed by clicking the **Panel Server** button on the Main Menu, is used to change the settings the Control Panel Server application uses for its operation. This screen is not used to change the control panel configurations.

*Figure 129. Panel Server Configuration Window*
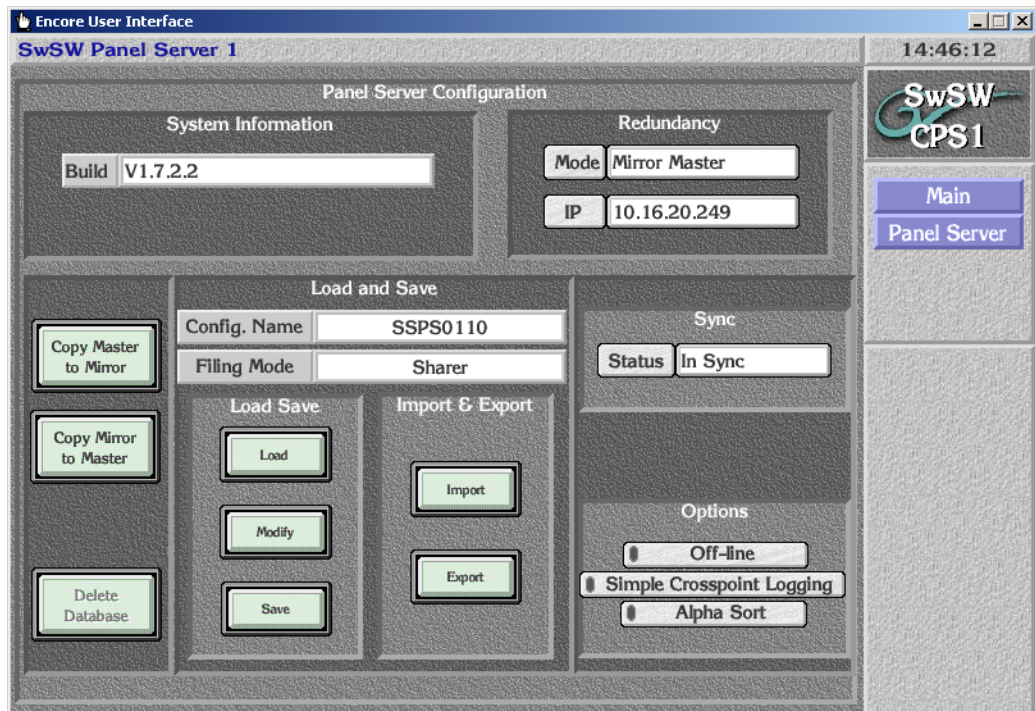


| System Information | **Build** | Reports the software version of the Control Panel Server application. Can't be changed by user. |
|---|---|---|
| Redundancy | **Mode** | Identifies the current redundancy mode of the Panel Server: **Mirror Master, Mirror Slave**, or **Disabled**. |
| | **IP** | Specifies the IP address of the partner device which will act as either the Panel Server Master or slave. |

**(lower left button pane)**

|  | **Copy Master to Mirror** | Forces a copy of the Panel Server database from the mirror master to the mirror slave. |
|---|---|---|
| | **Copy Mirror to Master** | Forces a copy of the Panel Server database from the mirror slave to the mirror master. |
| | **Delete Database** | This button is not operational and is grayed out. |
| Load and Save | **Config Name** | Displays the name of the currently loaded Panel Server configuration file. |

| | Filing Mode | Displays the Source of the active database — Local or Sharer. Cannot be changed here by the user. In Local mode, the database is loaded from the locally shared cache on the system controller. This mode is used when the Sharer is not detected during Panel Server start-up. If the Sharer comes on line after the Panel Server starts, the mode will remain Local until the user presses the **Modify** button. Doing so writes the local configuration to the Sharer and switches the filing mode to Sharer. In Sharer filing mode the database is loaded from the Sharer PC. |
|---|---|---|
| **Load Save** | Load | Opens a FilerFax window allowing you to select a Panel Server configuration file to load. |
| | Modify | Saves the Panel Server configuration from the configuration PC's memory to the Sharer. |
| | Save | Opens a window to name the current Panel Server configuration file. Once a name is entered, a FilerFax window opens that you use to save the data to the configuration PC. |

**Import and Export buttons**

| | Import | Imports a CSV (comma separated values) file from the directory you choose on the drive you specify in the subsequent screens: the floppy disk (fd0) or the primary hard disk (hd0) on the controller or the floppy drive (*IP number*//fd0) or the primary hard disk (*IP number*//hd0) of the workstation running the OUI. Importing a CSV file is an alternative way of quickly configuring the Panel Server. See *Configuration Export and Import* on page 168 for details. |
|---|---|---|
| | Export | Exports the current database settings as a CSV (comma separated values) file to the target and path you choose when you click the Path button: either to the PC's floppy disk (fd0) or to the PC's primary hard disk (hd0). These exported settings can then be used to configure other Panel Servers, and is also an effective way to back up a Panel Server configuration. See *Configuration Export and Import* on page 168 for details. |
| **Sync** | Status | Reports the current Panel Server mirror status. **In Sync**, **No Sync**, **No Mirror** or **No Redundancy**. |
| **Options** | Offline | Toggles the Panel Server on or offline. |

| | |
|---|---|
| **Simple Crosspoint Logging** | Makes the Panel Server application print crosspoint activities to the console of the SCB. The console can be viewed serially or via Telnet. The console output can also be captured to a file using Hyperterminal. |
| **Alpha Sort** | When enabled, Alpha Sort will be the default order used to display Sources and Destinations in their list windows. When disabled, the display order is by Source and Destination index number. |

# Panel Server Redundancy and IP Addresses

Redundancy parameters (namely the Mode and IP) can be configured after making the Panel Server offline. Choose the redundancy mode and then choose the partner's EN1's IP address. Make sure the mode and IP addresses on both partners correctly match.

For example, suppose, SCB1 with IP address 192.168.0.100 is to be configured as master and SCB2 with IP address 192.168.0.101 to be configured as mirror (slave). On OUI of the Panel Server running on SCB1, choose the mode as **Mirror Master** and IP as **192.168.0.101**. On OUI of the Panel Server running on SCB2, choose the mode as **Mirror Slave** and IP as **192.168.0.100**.

## Reasons for Loss of Redundancy Sync

With Encore 1.7.3 and newer software, Control Panel Servers can display the reasons why a redundant pair of CPSs are not in sync. If the mirror and master CPSs report **No Sync** on the Panel Server screen of the OUI, clicking on the **Status** text box opens a pop-up window. This window lists the reason(s) preventing synchronization. Users should check both the Master and Mirror CPS to get an accurate and comprehensive list of reasons.

If any panels are connected to only the Mirror or Master CPS, the panel names will be displayed in the popup window. A possible solution to this situation is to go to the Panel Network web page of each panel and ensure that the Primary and Secondary server IP addresses are specified correctly.

When a CPS starts up or is placed on-line, and when a control panel signs on, the CPSs will go out of sync briefly. The CPSs will indicate an approximate time (in seconds) needed to regain synchronization in the popup window.

# Panel Server Configuration Save and Load

The Panel Server allows multiple configurations to be saved in the Sharer database and easily reloaded by selecting the desired configuration name from the list of saved configurations. These Panel Server configurations

include all the individual configurations for all the control panels that
Panel Server services.

## Saving Panel Server Configurations

### Saving with a New Name

**1.** From the Panel Server Configuration screen (Figure 129 on page 202),
press the **Save** button.

**2.** A text entry box appears. Enter the name for the new configuration. The
Filer-Fax save window then opens(Figure 130).

*Figure 130. Filer-Fax Save popup screen*
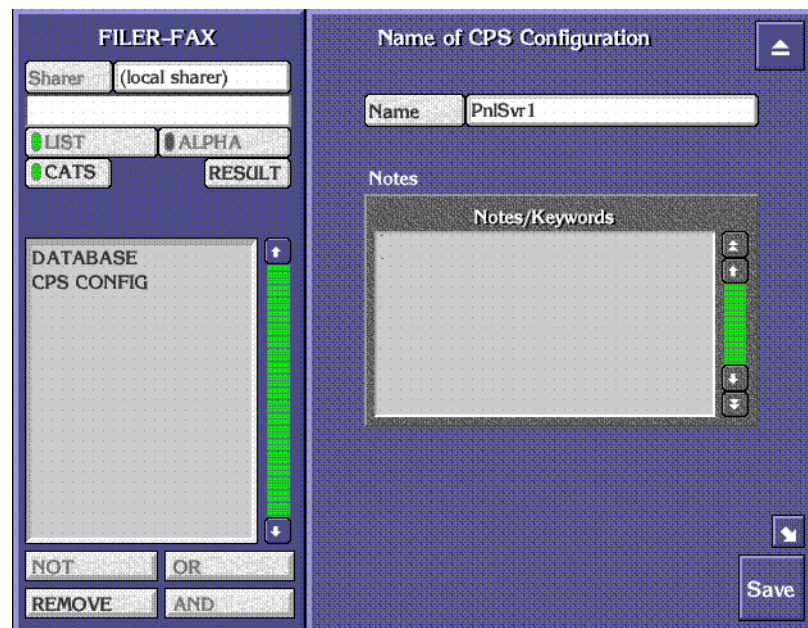


**3.** Use the CPS CONFIG or DATABASE as categories because these are the
categories with files that can be loaded into the Control Panel Server
application.

**4.** Click the **Save** button to save the Panel Server configuration file.

### Saving with the Existing Name

**1.** Press the **Modify** button to save the current configuration under the
currently chosen name.

## Loading Panel Server Configurations

Loading a Panel Server configuration replaces the files stored on the SCB
with the new files.

**Note** Although this change includes the individual control panel configurations, for Encore version 1.7.2 and earlier software the panels themselves will continue to use their existing configurations until the panel is reset, or the Panel Server application itself is reset.

1. From the Panel Server Configuration screen (Figure 129 on page 202), press the **Load** button to opens a Filer-Fax window Figure 131).

*Figure 131. Filer-Fax*
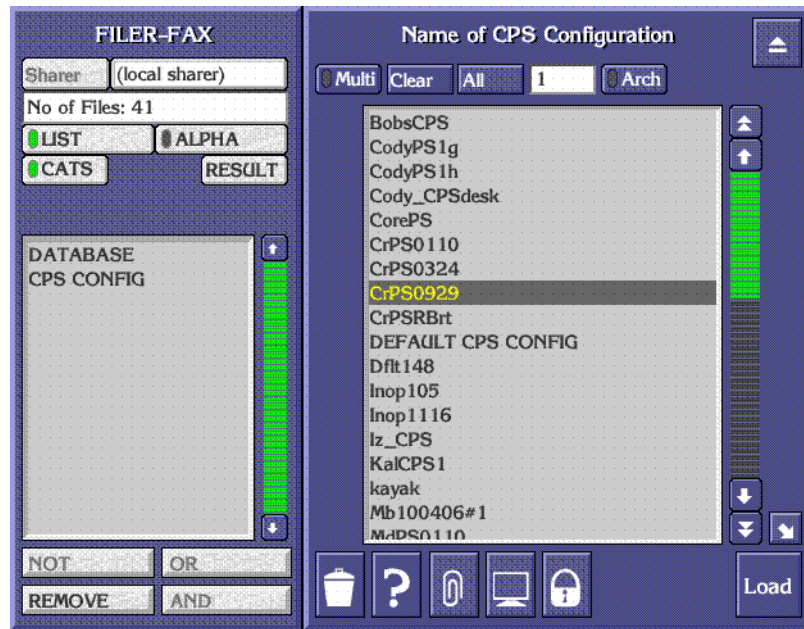


2. Choose the Category and the file to load. All the files in category CPS CONFIG are shown by default.

**Note** Selecting CATS will access a list of categories. Selecting one of these categories will access the files.

## Filing Mode Indication

Configuration changes are only permitted when the filing mode is **Sharer**, and are not allowed in **Local** filing mode. If the filing mode changes to Local

at any time (for example, if contact with the Sharer is lost), a warning message is posted on the OUI announcing that fact (Figure 132).

*Figure 132.  Local Filing Mode Warning Message*

CPS_151 : Filing mode is Local.
Changes cannot be saved
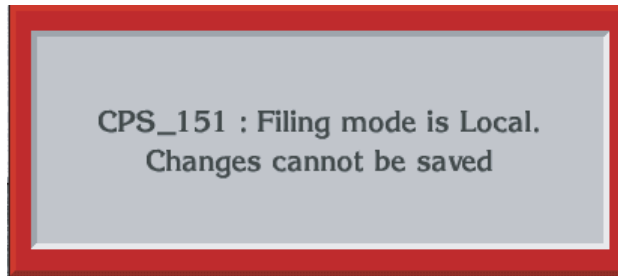
You will need to return to Sharer mode to make any change. Returning to Sharer filing mode is accomplished by either saving the existing configuration (using the **Modify** or **Save** buttons), or by loading a configuration (using the **Load** button).

# No Router Indication

With Encore V1.7.3 and newer software, Control Panel Servers can detect the loss of a Router Controller and dynamically report this condition to control panels and RCL clients in their Area.

**Note** A Control Panel Server may take a up to 90 seconds to recognize the loss of a Router Controller.

The loss of a Router Controller is reported in the following ways:

- Control panels display **NoRouter** for all Destinations of the failed Router Controller.

- RCL Servers send a notification about the loss of the Router Controller to all subscribed clients.

- The Control Panel Server running on the SCB sends out SNMP notifications to all the registered SNMP Managers.

# Quick Control Panel Server Salvo Startup

With Encore V1.7.3 and newer software, the Control Panel Server skips loading Salvos at startup if the copies of Salvos stored in flash memory match those stored on the Sharer. If they match, the copies of Salvos on the flash are used. This significantly speeds up CPS start up.

**Note** Always launch the Sharer with the Watchdog application, not directly, to ensure the Quick CPS Salvo Startup feature is active.

A new Salvo Monitor application must be running to enable this feature. That application is launched automatically by the Watchdog startup application, and runs continuously in the background.

The Sharer PC must also be registered as an Engine to run the Salvo Monitor program. This registration is usually already in place on established Encore systems, but should be confirmed.

## Panel Server Logging

Panel server event logging is enabled or disabled by the Simple Logging configuration flag. Panel Server logging has a low priority and should not degrade system performance if turned on. However, we recommend logging be turned off unless you are troubleshooting the system.

Control panel Take requests are logged to the system controller console in the format:

```
<date> <time> <source name> to <destination name> from <panel name>
```

Control panel Protect/lock requests are logged to the system controller console in the format:

```
<date> <time> <protect/lock type> on <destination name> from <panel name>
```

The event log will also record when a Salvo is executed from a panel (although the name of the actual Salvo executed is not included in the log).

# Panel Configuration Screen Description

## Menu Bar Buttons

| | |
|---|---|
| **Main Menu** | Returns you to the main screen of the Control Panel Server application. |
| **Panels button (Encore type shown)** | Returns you to the selection screen for that type of panel. The Encore system supports several different panels, including those originally designed for different model routers. Selecting a specific type of panel automatically opens the Template Management window. |
| **Specific Panel Type button (XY Shown)** | Like the rest of the Encore environment, the bottom-most button on this upper section of the Menu Bar indicates the window you're viewing — in the example we'd be viewing an Encore XY panel configuration window. |
| **SELECT** | Opens a Template Management window where you can Load a different template, Save a selected template by another name, Rename a selected template, Delete a selected template, Set a selected template as the default, or Copy a selected template to one or more control panels of the same type. See *Panel Template Management Window on page 214*. |
| **MODIFY** | Saves the currently loaded template or panel configuration to the Panel Server database. |

### Hiding the Menu Bar

Control panel screens are, for the most part, designed to work with the Menu Bar out of the way. You can click the **Clock** in the upper right corner of the Encore OUI to alternately hide or display the Menu Bar.

## Control Panel Screen Representation

Clicking on a panel type and specific panel model brings up an on-screen representation of that panel.

For a full rack-width control panel, the upper portions of the configuration window looks like its physical control panel counterpart if it were cut in half and stacked with the left half atop the right. All the buttons and displays on the left half of the physical control panel are on the top of the corresponding control panel window and the buttons and displays on the

right half of the physical panel are beneath the others in the control panel window. Half rack width panels are shown as they physically appear.

## Panel Configuration Screen Example (Encore XY)

The panel configuration screen offers two views. The Assignment view (chosen by clicking the **Assignment** Panel Button Function on the lower left) displays the functions that have been assigned to each button on the panel (Figure 133).

*Figure 133. Encore XY Panel Representation, Assignment View*
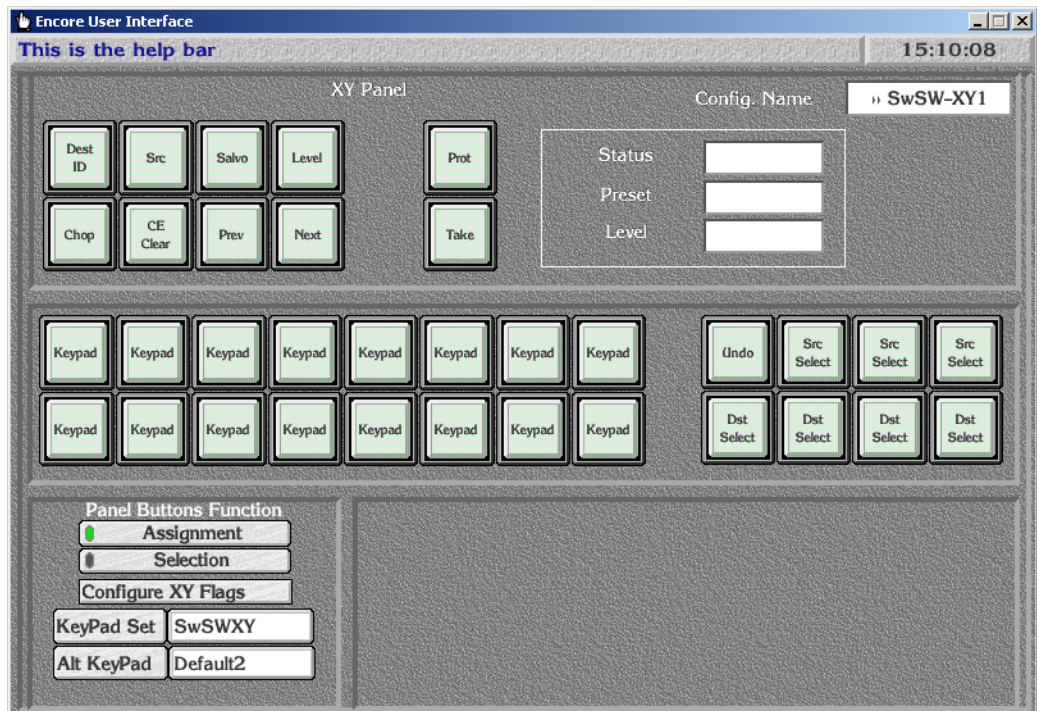


The Selection view (chosen by clicking the **Selection** Panel Button Function on the lower left) shows the actual Source or Destination currently selected

by that button, or the button's assignment if selections are not available for that function (Figure 134).

*Figure 134. Encore XY Panel Representation, Selection View*
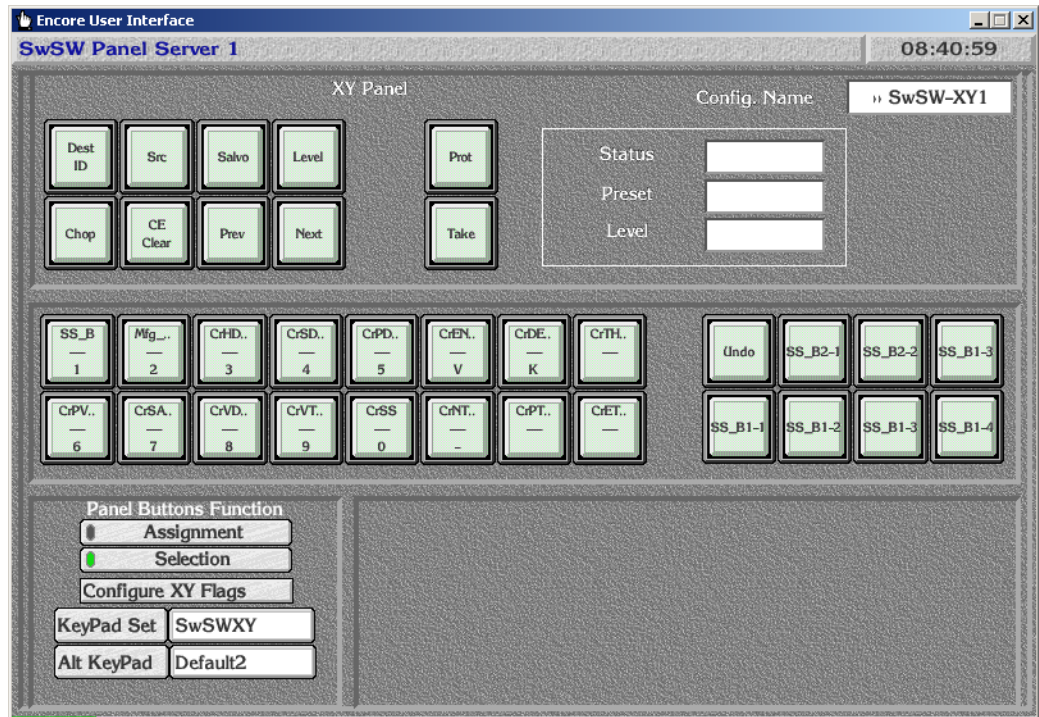


**XY Panel**   Reports the type of panel of this screen representation.

**Config. Name**   Displays the name of the template or configuration loaded.

**(panel buttons)**   Each button displays its assignment (SrcSel, DstSel, etc.) or selection, depending on the **Assignment** or **Selection** indicator button. In the assignment mode, click on any button to open a list from which you can specify that button's assignment/function. In the selection mode, click on any buttons to open the list appropriate to the assignment/function you've chosen for by means of the **Assignment** indicator button: a list of Sources, Destinations, Salvos, Levels, or Areas.

**Status Preset Level**   Non-functional representation of other panel features (for example, alphanumeric displays).

**Panel Buttons Function**

**Assignment**    When on (green light lit), allows you to specify the function of each button.

**Selection**    When on (green light lit) allows the selection of items for the buttons. To change a selection for a button, click that button and choose from the list window which appears.

**Configure Flags**    Opens the Attributes and Flags window for that type of control panel. See *Configuration Attributes and Flags Window* on page 218

**KeyPad Set**    Displays the name of the primary KeyPad set that has been assigned to that panel. Clicking on this item opens a menu from which you can select from the available KeyPad Sets. See *KeyPad Set Window* on page 216

**Alt KeyPad**    Displays the name of the alternate KeyPad set that has been assigned to that panel. Clicking on this item opens a menu from which you can select from the available KeyPad Sets.

# Panel Button Function Assignments

Table 24 lists the buttons functions available for assignment on each type of control panel. **Y** = assignable button, **hard** = hardware defined button/knob.

*Table 24.   Assignable Buttons by Control Panel Type*

| Button Function | Encore | | | | | Kalypso | | SMS | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | BPS | PMB | XY | 48B | UCP | KMD | KSD | UCP | EDP | P48 | MB8 | BPS32 |
| All Level - Configuration | Y | | | | | Y | | | | Y | | |
| CE / Clear | | Y | Y | | Y | | | Y | Y | | Y | |
| Chop [a] | Y | Y | Y | | Y | Y | | Y | Y | Y | Y | Y |
| Destination / Identification | | Y | Y | | Y | Y | | Y | Y | | Y | |
| Destination Page Mode | | Y | | | | | | | Y | | Y | |
| Destination Select | Y | | Y | Y | Y | | Y | Y | | Y | | Y |
| Display Alias Names | Y | Y | Y | | Y | Y | | Y | Y | Y | Y | Y |
| Keypad Filter | | Y | Y | | Y | | | Y | Y | | Y | |
| Keypad Local Source | | Y | Y | | Y | | | Y | Y | | Y | |
| Level / Inverse | | | | | | | | | | | | Y |
| Level Mode | | Y | Y | | Y | | | Y | Y | | Y | |
| Level Page Mode | | Y | | | | | | | Y | | Y | |
| Level - Next | Y | | | | | Y | | | | Y | | |
| Level - Previous | Y | | | | | Y | | | | Y | | |
| Level Select | Y | | Y | Y | Y | Y | Y | Y | | Y | | |
| Lock–Protect | Y | | Y | Y | Y | Y | Y | Y | | Y | | Y |
| Next | Y | hard | Y | | hard | Y | | Y | | Y | Y | |
| Next Area | | Y | Y | | | | | | | | | |
| Not Assigned | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y |
| Panel Enable | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y |
| Previous | Y | hard | Y | | hard | Y | | Y | | Y | Y | |
| Previous Area | | Y | Y | | | | | | | | | |
| Previous Next Knob | | | | | | | | | hard | | | |
| Prot / Hold | | hard | | | | | | | hard | | hard | |
| Salvo Mode | | Y | Y | | Y | | | Y | Y | | Y | |
| Salvo Page Mode | | Y | | | | | | | Y | | Y | |
| Salvo Select | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y |
| Shift | | Y | Y | | Y | | | Y | Y | | Y | |
| Source / Identification | | | | | | | | | | | | Y |
| Source Mode | | Y | Y | | Y | | | Y | Y | | Y | |
| Source Select | Y | | Y | Y | Y | Y | Y | Y | | Y | | Y |
| Take | | | Y | | Y | | | Y | | | | |
| Take / Load | | hard | | | | | | | hard | | hard | |
| TallyLvl | | | | Y | | | Y | | | | | Y |
| Tally Level - ID | Y | | | | | Y | | | | Y | | |
| Undo Take | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y |

[a] Panel button can be assigned but feature not yet implemented.

# Panel Template Management Window

*Figure 135. The Panel Template Management Window*
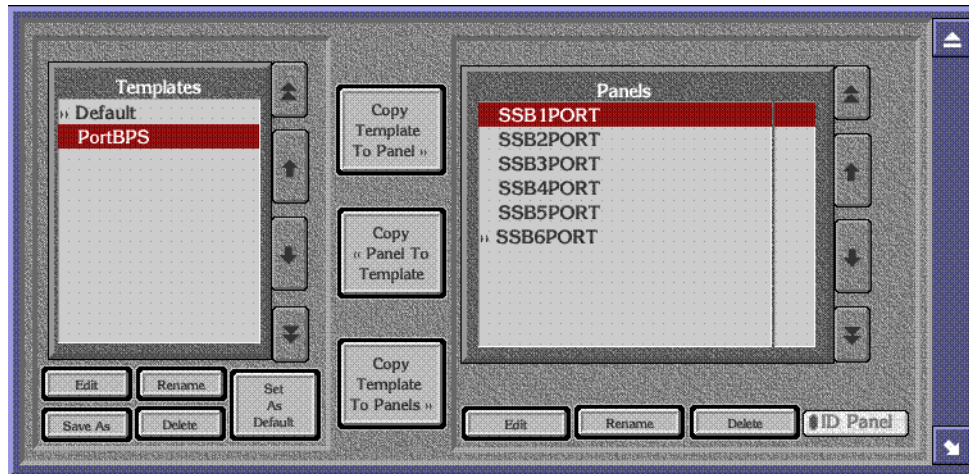


**Templates**  The controls in the left pane are for templates.

**Templates list window**  Uses a scrollable list window to display all of the templates available for the selected type of panel. Only templates appropriate for the type of panel you've selected are displayed in this list.

**Edit**  Loads the template selected in the Templates list window into the application for editing.

**Rename**  Opens a window where you can rename the template selected in the Templates list window. You cannot rename the factory Default template. The template name can be up to eight characters in length. Avoid leading spaces, angle brackets (< >) on either end of the template name, and trailing pound signs (#).

**Set As Default**  Sets the template you have selected in the Templates list window as the default template for that type of panel. The template designated as the default will be automatically assigned to any new panels of that type (for example, 48B, BPS, PMB, or XY) installed in the system until a different template is copied to the panel(s). If any template other than the factory Default is designated as the default template, a chevron sign (>>) will be placed in front of that template name in the Templates list window to designate its status.

| | |
|---|---|
| **Save As** | Opens a window where you can save the template you have selected in the Templates list window by another name. |
| **Delete** | Deletes the template selected in the Templates list window. |

Controls between the two panes are used to copy data between templates and panels.

| | |
|---|---|
| **COPY Template To Panel** | Copies the template selected in the Templates list window to the control panel selected in the Panels list window, over-writing any existing information in the selected control panel. |
| **COPY Panel to Template** | Copies the configuration of the control panel selected in the Panels list window to the template selected in the Templates list window, over-writing any existing information in the selected template. |
| **COPY Template to Panels** | Copies the template selected in the Templates list window to multiple control panels. |

Panels   Controls in the right pane are for control panel configurations.

| | |
|---|---|
| **Panels list window** | Displays a scrollable list of all of the panels of the type you selected (for example, 48B, BPS, PMB, or XY) which are, or have been, connected to the system. These names will be the factory default panel names unless you've renamed them. Note, however, that you can also display panels by their IP numbers instead. See the Name List indicator button. Chevrons (>>) before a control panel name indicates that it is physically connected to the network. Those without chevrons were once connected to the network and are known by the system, but are not currently connected to the system. |
| **Edit** | Loads the configuration from the control panel selected into the Panels configuration screen for editing. |
| **Rename** | Allows you to create a more user-friendly or descriptive name for the panel you select in the Panels list window. A control panel can be renamed only if it is off line (no asterisk follows its name). This name is saved to both the control panel and the Panel Server database. Avoid leading spaces, angle brackets (< >) on either end of the panel name, and trailing asterisks (*). |

**Delete**
Deletes the control panel you select in the Panels list window, only if that control panel is not currently connected. Panels with a double arrow (>>) before their name are connected and can not be deleted from the list.

**ID Panel**
Toggles control panel identification on (green light lit)/off (green light extinguished). Causes the control panel you've selected in the Panels list window to blink all buttons and display panel identification information in the control panel's display if it has one. The selected control panel stays in the ID mode until it is toggled off by clicking the button a second time or by pressing the ID button on the panel itself (on the 48B panel, press any safe button).

# KeyPad Set Window

*Figure 136. KeyPad Set Window, Default Selected*
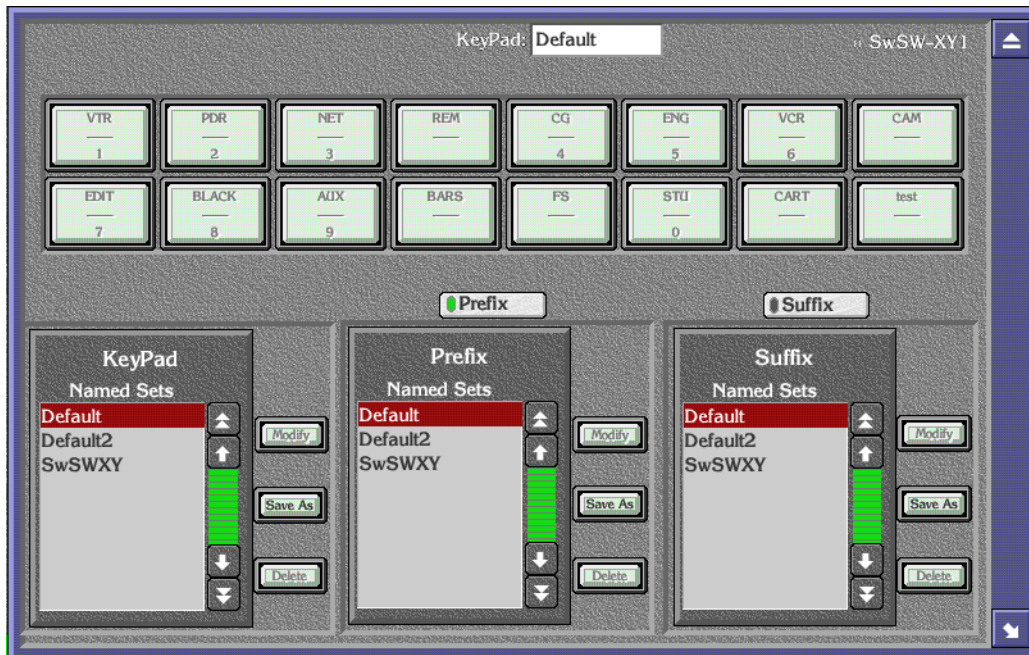


Displays the name of the currently selected KeyPad set.

The name of the currently selected control panel configuration file is displayed on the upper right.

**(KeyPad Buttons)**

Shows a representation of the current KeyPad. With either the **Prefix** or **Suffix** button below illuminated, clicking on a KeyPad button opens a text entry window for changing the Prefix or Suffix text for that keypad button.
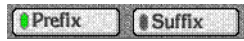
Selects whether the Prefix or Suffix text will be edited for that named set when a KeyPad button is selected.

The scrolling window on the left allows selection of a KeyPad set. Each KeyPad set contains a Prefix set and a Suffix set of button legends, selectable from the two windows on the right.

The **Modify, Save As**, and **Delete** buttons are used to edit, create, and delete KeyPad sets in that window. The Default and Default2 KeyPad sets cannot be edited or deleted. You can save a Default file under a new name for editing. Also see *Exclusion, Page, and Keypad Set Precautions* .

## Keypad Set Conversion

Keypad Set button arrangements on control panels have two different physical layouts:

- Four rows with 4 buttons in each row (4x4), or

- Two rows with 8 buttons in each row (2x8).

Before Encore Release 1.7 users had to create and assign keypad sets based on this physical layout. For example, an Encore XY panel would require a 2x8 keypad set, but a PMB panel would need a separate 4x4 set, which would have to be created separately. With Encore V1.7, any keypad set can be assigned to any control panel type regardless of the button layout. Keypad sets are automatically converted for use with the other physical layout (Figure 137).

*Figure 137.  Keypad Set Conversions*
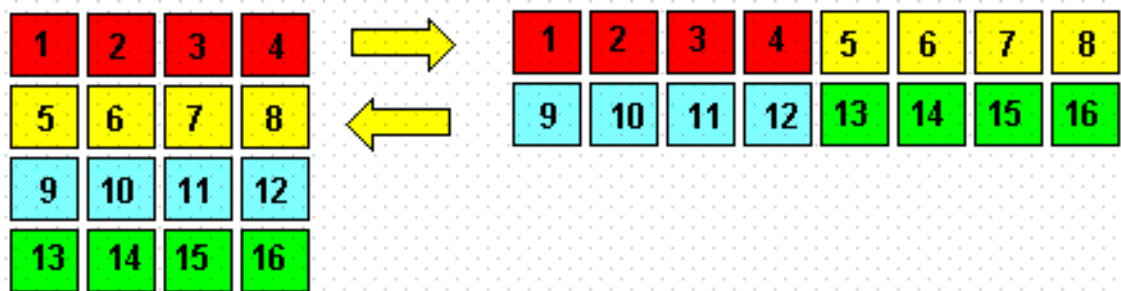
During the conversion, if any 2x8 and 4x4 keypad sets have the same name, the 4x4 keypad sets are retained and 2x8 keypad sets are deleted. If your configuration uses identical names for 2x8 and 4x4 keypad sets and if their contents are different, rename them with unique names before attempting to upgrade. Changing a keypad set can affect more than one panel.

## Configuration Attributes and Flags Window

The Configuration Attributes and Flags window can be accessed from each type of panel configuration screen. Some fields or buttons may be inactive because they are not appropriate for the kind of control panel you're configuring. Some of these controls open windows allowing the selection or entry of parameters. Multiple controls may also inter-relate, such that selecting one activates another. Any settings made are specific to the template or configuration that is saved.

*Figure 138. Configuration Attributes and Flags Window*
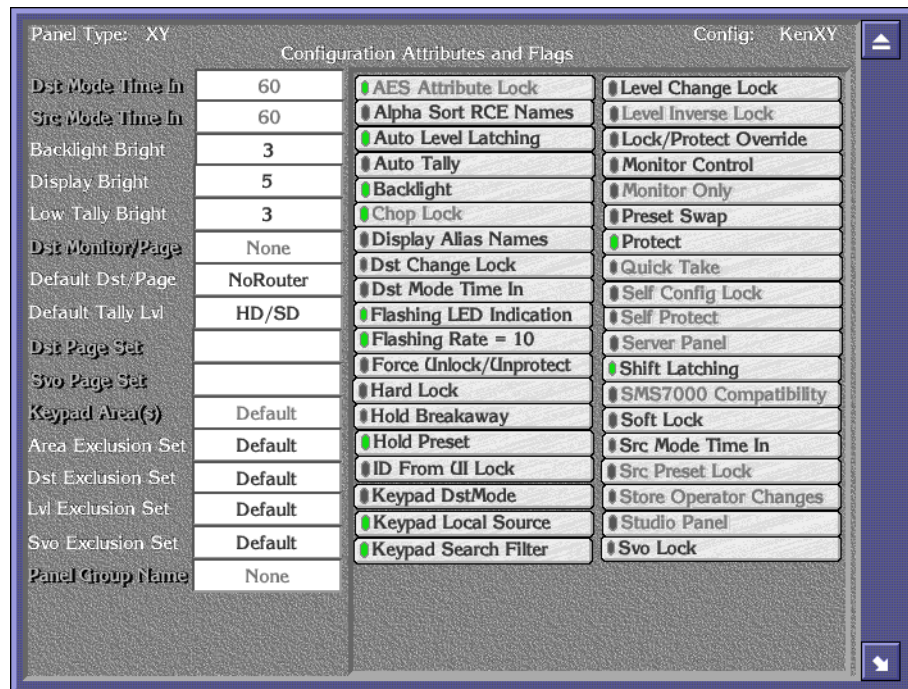


**Panel Type:**    Displays the type of panel selected.

**Config. Name**    Displays the name of the template or configuration when one is loaded.

**(Left Column)**   Some fields in this column are activated and deactivated by setting parameters in the right columns.

**Dst Mode Time In**   Specifies the length of time in seconds (from 1 to 1200) with no button activity before the panel automatically returns to Destination Mode. The **Dst Mode Time In** indicator button in the middle column of the Configuration Attributes and Flags window must be enabled before this feature is active. Dst Mode Time In and Src Mode Time In are mutually exclusive. Enabling one disables the other, even though any existing time settings are maintained in the disabled field.

**Src Mode Time In**   Specifies the length of time in seconds (from 1 to 1200) with no button activity before the panel automatically returns to Source Mode. The **Src Mode Time In** indicator button in the right column of the Configuration Attributes and Flags window must also be enabled before this feature is active. Src Mode Time In and Dst Mode Time In are mutually exclusive. Enabling one disables the other, even though any existing time settings are maintained in the disabled field.

**Backlight Bright**   Specifies the backlight brightness of the panel buttons within a range from 0 to 9. 0 is dimmest, 9 is brightest.

Backlighting is typically used in dimly lit environments like trucks. However backlighting also provides prompts for which buttons are available for a mode of the control panel. This feature is not available in legacy SMS7000 control panels due to hardware limitations. This feature requires the Backlight flag be enabled.

**Display Bright**   Specifies the brightness of the panel display characters within a range from 1 to 7. 1 is dimmest, 7 is brightest.

This feature is typically used to control visibility in a variety of lighting environments. This feature is not available in legacy SMS7000 control panels.

**Low Tally Bright**  Specifies the brightness of panel button low tally display within a range from 1 to 9. 1 is dimmest, 9 is brightest.

This feature is intended for special conditions and is slightly brighter than backlighting. For users not desiring the flashing LED indication, the Low Tally feature is used to denote special conditions such as breakaway Levels or ownership of a Destination Lock/Protect. This feature is not available in legacy SMS7000 control panels.

Note that the actual low tally illumination of a panel button cannot be lower than backlight brightness, even if the low tally setting is given a lower value.

**Dst Monitor/Page**  Opens a menu for configuring the panel's controllable monitor(s) as well as a QC Destination. Configuring a QC Destination allows users to select the Monitor Only flag which disables all crosspoint change capability from the panel except when the panel is actively controlling the defined QC Destination. This is feature is typically used for quality control monitor stations to prevent unwanted crosspoint changes by a quality control operator. This feature requires that the Monitor flag be enabled.

**Default Dst/Page**  Opens a menu to configure the panel's default Destination(s).

**Default Tally Lvl**  Because a panel's controlled Destination can have multiple Levels, the user must define which Levels report the status. The default tally Level is used to define the initial Level the panel will tally status on. All panels can also dynamically change which Level the panel tallies, via button presses on the control panel.

**Dst Page Set**  Available only on panels that can control 8 different Destinations at a time. Opens a menu used to configure multiple pages of Destinations that the panel can access using Destination Page mode.

**Svo Page Set**  Available only on panels that can control 8 different Destinations at a time. Opens a menu used to configure multiple pages of Salvos for quick Salvo access.

**Keypad Area(s)**  This feature allows panels with keypad sets to limit to only the specified Areas the names searched for by keypad entries. A menu opens allowing the desired Areas to be selected. The **Keypad Local Source** flag must be disabled for this feature to be accessible.

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| **Area Exclusion Set**<br><br>**Dst Exclusion Set**<br><br>**Lvl Exclusion Set**<br><br>**Svo Exclusion Set** | Permits the blocking of Area, Destination, Level, or Salvo access by a control panel. These features can limit that panel's search and control capabilities to only the items (Area, Destination, or Level) configured to not be excluded. By default all existing or newly created Areas and Destination are not excluded from a control panel, but by default all Salvos ARE excluded. For customers with large name sets this feature is useful by reducing the name sets seen or controlled by a specific control panel to just the items of control desired for the panel. These Exclusion Sets can be used in combination to limit a control panel's access very specifically. For panels with preset scroll capability only non-excluded items will appear when scrolling. Exclusion sets are global configuration items that can be shared between control panels. If an Exclusion Set is changed, a message is posted warning that other control panels or automation clients using that Exclusion Set will also be affected. Also see *Destination Exclusion Set Configuration Menu* on page 228 and *Exclusion, Page, and Keypad Set Precautions* on page 229. |
| **Panel Group Name** | Selects the panel to be in a defined panel group as master or Expansion panel (see *Control Panel Grouping* on page 231). |
| **(Center Column)** | (Green indicator light = enabled<br>No indicator light = disabled) |
| **AES Attribute Lock** | This feature is currently not available. |
| **Alpha Sort RCE Names** | Sorts Source and Destination names alphanumerically. This feature can also be assigned to a panel button to toggle it on or off directly on the control panel. |
| **Auto Level Latching** | Determines how a control panel will behave when performing a Level breakaway Take. When ON, only the preset breakaway Levels will remain preset after a Take. When OFF, the panel will automatically preset all non-excluded Levels controllable by the Destination(s) being controlled after a Take. |
| **Auto Tally** | When ON, the panel will automatically Tally on the first available non-excluded controllable Level for each Destination the panel is controlling. |
| **Backlight** | Enables/disables the backlight feature for control panel buttons. |
| **Chop Lock** | This feature is currently not available. |

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| **Display Alias Names** | When ON, displays the aliases defined for Sources, Destinations, etc. This feature can also be assigned to a panel button to toggle it on or off directly on the control panel. |
| **Dst Change Lock** | When ON, the configured Destinations on a panel will not be able to be changed using Destination Select Buttons or Destination mode on that panel. However, Destination Page mode may still be used to change the panel's controllable Destinations to the those defined in the Destination page set. |
| **Dst Mode Time In** | When ON, the panel will automatically return to Destination Mode after the specified length of time with no button activity. The time is specified in the **Dst Mode Time In** field. **Dst Mode Time In** and **Src Mode Time In** are mutually exclusive. Enabling one disables the other. Existing time settings are maintained in the disabled field, however. |
| **Flashing LED Indication** | When ON, this feature activates additional flashing panel button prompts. Typically this is used to identify the owner of a Destination Lock/Protect by flashing the Protect button of the control panel that initiated the Lock/Protect. This feature is also useful for facilities with multiple Areas and tie-lines. When a tie-line Source is Preset, the Take button(s) will flash to indicate the Take requires the use of a tie-line. |
| **Flashing Rate** | This feature is operates in conjunction with the **Flashing LED Indication** flag, setting set the blink rate of the buttons. (0.1 sec. per count, 1 to 50). |
| **Force Unlock/ Unprotect** | Typically this is left OFF because this flag creates a "super user" control panel. When ON, allows the panel to force an UnLock/UnProtect on a controllable Destination. |
| **Hard Lock** | When ON, allows the panel to Hard Lock a Destination, preventing any panel (including the one used to set the Hard Lock) from changing the Source for that Destination. The panel initiating the Hard Lock must remove the lock before that Hard Locked Destination's Source can be changed. The only exception is a "super user" panel (**Force Lock/Protect**, **Lock/Protect Override**) can override a Hard Lock. This flag is mutually exclusive with **Soft Lock** and **Protect**. |

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| **Hold Breakaway** | When enabled, the panel will retain Level breakaway settings even when new Destinations are selected or the router configuration changes Destinations configured levels. Note that if the user presets Levels and selects a Destination that does not support any of the preset Levels, the user must manually preset Levels to match the controllable Levels for the new Destination. The Panel Server will not change the preset Levels automatically to match the Destinations controllable Levels when this flag is enabled and a Level preset change has been effected. The Hold Breakaway feature is not available on MCO, COS, CLNT, and SVR panels (the flag is grayed out). |
| **Hold Preset** | When ON, a panel holds the preset Source, Destination, or Salvo for additional Takes after a Take is executed. When OFF, presets are cleared after each Take. |
| **ID From UI Lock** | When ON, prevents the OUI from blinking a control panel's buttons for device identification. When OFF, panel ID is permitted. |
| **Keypad Dst Mode** | When ON, allows the panel to automatically use the secondary (alternate) keypad set whenever the control panel enters Destination mode. This allows users to define separate keypad sets for Source and Destination mode for quick access to these name sets. |
| **Keypad Local Source** | When ON, restricts the keypad entered Source names to only search for a match in the same Area as the panel's controlled Destination(s). This feature can also be assigned to a panel button to toggle it on or off directly on the control panel. |
| **Keypad Search Filter** | When ON, allows the keypad entered preset names to be searched for exact root name matches and scroll through only matching root name Sources. This feature can also be assigned to a panel button to toggle it on or off directly on the control panel. |
| **(Right Column)** | (Green indicator light = enabled<br>No indicator light = disabled) |
| **Level Change Lock** | When ON, prevents a panel from initiating a break-away. Note, however that a Source will automatically cause a breakaway if defined with fewer Levels than its routed Destination. |
| **Level Inverse Lock** | When ON, the Level Invert feature is disabled. |

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| **Lock/Protect Override** | Typically this is left OFF because this flag creates a "super user" control panel. When ON, allows the panel to change the Sources for Destinations that are Locked or Protected by another device in the system. |
| **Monitor Control** | When ON, allows the panel to control system Output Monitors configured by the **Dst Monitor/Page** parameter. Monitor Control Takes the control panel's controlled Destination(s) to the Output Monitor that is typically used for quality control. |
| **Monitor Only** | When ON, allows only Output Monitor control from the control panel, preventing the panel from making any other crosspoint changes. This feature is typically used for quality control stations. |
| **Preset Swap** | When ON, swaps the existing active Source of the controlled Destination to the preset Source following a Take. This allows a simple and quick Undo Take capability. |
| **Protect** | When ON, allows the panel to Protect a Destination, preventing devices except for the panel initiating the Protect from changing the Source of the Protected Destination. The panel that initiated a Protect can remove that Protect. Note that a "super user" panel (**Force Lock/Protect**, **Lock/ Protect Override**) can override a Protect. This flag is mutually exclusive with **Hard Lock** and **Soft Lock**. |
| **Quick Take** | When ON, enables one button Take mode (only available on CLNT panels). The CLNT panel's **Protect** buttons will also change their function. Pressing **Protect** in this mode allows identification of the source on each keypad button before performing a Take (by pressing the numbered buttons). Turn the **Protect** button off to perform a Take. All Taken sources are automatically Protected in this mode. Protects can be removed using the Encore OUI, or using a panel with Protect override. |
| **Self Config Lock** | When ON, disables the panel's ability to dynamically self configure (assign Sources, Destination, Levels or Salvos to buttons) using the control panel itself. (See *Control Panel Self Configuration* on page 230.) |
| **Self Protect** | This feature is currently not available. |
| **Server Panel** | This feature is currently not available. |

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| **Shift Latching** | This feature determines the behavior of the Shift button on the panel. When ON, after the Shift button is pressed the panel operates in shifted mode until the button is pressed again to toggle it off. When OFF, after the Shift button is pressed the panel operates in the shifted mode only until a keypad button is pressed, and then automatically reverts to non-shifted operation and toggles the Shift button off. |
| **SMS7000 Compatibility** | When ON, restricts some panel features for SMS7000 compatibility. |
| **Soft Lock** | When ON allows the panel to Soft Lock a Destination, which prevents all devices from changing the Sources for that Soft Locked Destination until the Soft Lock is removed. Any panel with the Lock/Protect feature active can remove a Soft lock from a Destination. Note that a "super user" panel (**Force Lock/Protect**, **Lock/Protect Override**) can also override a Soft Lock. This flag is mutually exclusive with **Hard Lock** and **Protect**. |
| **Src Mode Time In** | When enabled, automatically returns the panel to Source Mode after the specified length of time with no button activity. That length of time is specified in the **Src Mode Time In** field in the left column of the Configuration Attributes and Flags window. **Src Mode Time In** and **Dst Mode Time In** are mutually exclusive. Enabling one disables the other, even though any existing time settings are maintained in the disabled field. |
| **Src Preset Lock** | This feature is currently not available. |
| **Store Operator Changes** | This feature is currently not available. |
| **Svo Lock** | When ON, prevents scrolling and execution of Salvos from scrolling Salvo mode access. Salvo Select operations are not affected by this configuration flag. |

## Configuring Encore Control Panels

Encore control panels can use default configurations, or they can be re-configured to meet specific requirements.

Before configuring any control panels, confirm that you have configured your Router Controller. For details and procedures, see *Section 5-Router Configuration*.

**1.** From the Panel Server Main screen, click the **Panels** button for the type of panel (Encore, Kalypso, SMS), then click on the specific model of control panel you wish to configure.

When the panel main window appears, all the buttons will be blank and the **Config. Name** field in the upper right corner will indicate NO CONFIG.

**2.** Click the **Select** button on the Menu Bar to open the Panel Template Management window (see page 214).

**3.** Choose a template or configuration file to use as a starting point for that panel.

**a.** On a new Encore system you will see only a Default template and a list of all panels of the selected type connected to the system. These panels will initially use configurations based on the Default template (they will all have identical settings) and each configuration will be given that panel's name.

**Note**     You can select a template and use the **Save As** button to make yourself a copy with a name reflecting its intended distinction from the other templates. You can then load and proceed to edit your new template.

**b.** On an existing Encore system you can select an existing template (in the **Templates** list window) or an existing configuration (in the **Panels** list window).

**4.** Click the appropriate **Edit** button to load the template or configuration file for editing. The name of the template or configuration appears in the Config. Name field in both the Panel Template Management window and the panel's main window behind it.

**5.** Now proceed to edit your template or configuration.

**a.** Choose **Assignment** and assign the desired functions to the buttons.

**b.** Choose **Selection** and select the function desired for each button (Sources, Destinations, Levels, or Salvos). If there are multiple Areas in your system you will need to first select the Area, and then the specific item within that Area.

**c.** On panels with KeyPads, select the Primary and Alternate KeyPad sets to use with that panel.

**d.** Choose **Configure Flags** and set any additional features/restrictions for your panel.

**Note**  Changes made to an on-line control panel configuration take effect immediately on that panel. However, these changes are not persistent at this time. The control panel will return to it's previous configuration if you exit the Panel Server configuration screen. You use **Modify** to save these changes.

6. When satisfied with your template or configuration settings, click the **Modify** button on the Menu Bar to save your changes.

**Note**  If you just want to abandon your changes and start all over again, you can click the **Select** button on the Menu Bar, choose not to save your changes when prompted, and reload the template or configuration.

7. If you created a template, you can now assign that template to multiple multiple panels, to ensure they operate identically.

 **a.** Click **Select** to go to the Template Management Window.

 **b.** Choose the template in the left pane you wish to use.

 **c.** Choose a panel in the right pane, then click **Copy Template to Panel**. Alternatively, you can assign that template to multiple panels in the right pane by clicking on **Copy Templates to Panels**.

## Rapid Configuration

During panel configuration, you can now assign a range of Sources or Destinations to several panel buttons in left to right order at the same time. Rapid configuration can be used to assign button Selections, but is not available for button Assignments.

1. Open the Panel Server application, select the panel type you are configuring, and choose **Selection**.

2. Click on the left-most panel button of the range of buttons you wish to configure.

3. In the popup, click on the folder icon of the desired Area, which opens a list of items to choose from.

4. After opening the Area folder, click on that folder icon once more to deselect the Area Name.

5. With the **Multi** button lit, select a range of items by clicking on them individually.

6. When you click to accept, all the items you selected will be assigned to a range of panel buttons from left to right in the order they were selected.

# Destination Exclusion Set Configuration

Destination Exclusion Sets can be configured on panels that support scrolling through multiple Destinations. Panels configured for specific Destinations (48B, KDS, BPS32) do not support Destination Exclusion Sets.

Destination Exclusion Sets restrict a panel's control to a defined subset of Destinations. Any number of Destination Exclusion Sets can be defined, and the same Destination Exclusion Set can be applied to any number of control panels.

1. Access the Configuration Attributes and Flags window for the desired panel.

2. Click on Dst Exclusion Set. The Destination Exclusion Sets configuration screen appears (Figure 139).

*Figure 139.*
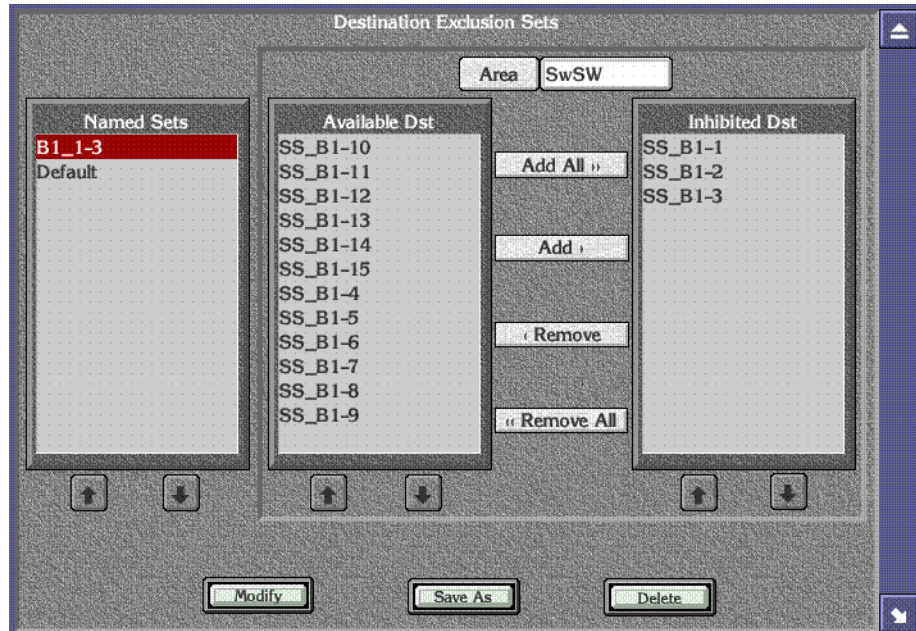


## Destination Exclusion Set Configuration Menu

The **Named Sets** list box on the left side of the screen shows all the Destination Exclusion Sets configured in the CP Server. When the CP Server starts up for the first time, only the Default Exclusion Set appears. The Default Exclusion Set cannot be edited. The selected Destination Exclusion Set is highlighted in red. The Panel configuration or Template currently being edited will use the selected Destination Exclusion Set.

The **Available Dst** list box in the center shows the Destinations which are not excluded in the currently selected Area and the **Inhibited Dst** list box on the right shows the Destinations which are inhibited in the currently selected area.When a panel is configured to use this Exclusion Set the Destinations

appearing under the **Inhibited Ds**t list cannot be controlled from that panel. If a list box has more than twelve entries, the Up and Down arrows below the box are activated for scrolling that list.

The Available and Inhibited Destination lists can show Destinations pertaining to only one Area at a time. However, a Destination Exclusion Set may exclude Destinations from any or all defined Areas. You will first need to choose the Area before you can exclude Destinations in those Areas. Clicking on the **Area** button above these two lists opens a list of available Areas. The Home area of the CP Server is chosen by default.

Any change made to a Destination Exclusion Set will affect all control panels currently using that specific Destination Exclusion Set.

- **Save As** opens a pane allowing you to name a new Destination Exclusion Set with the currently specified Destinations. After the save that new Destination Exclusion Set will be selected.

- **Modify** commits the changes to the Sharer database.

- **Delete** deletes the currently selected Destination Exclusion Set and selects the Destination Exclusion Set above the deleted one.

## Exclusion, Page, and Keypad Set Precautions

Exclusion Sets, Page Sets, and Keypad Sets are designed to be shared and used by multiple control panels and/or RCL automation clients for easy configuration of the system. Since these items can be shared by multiple device configurations, it is important to ensure any change made to any of these sets is desired by all device configurations sharing the set. The Encore OUI warns the user about the number of device configurations and which device configurations are sharing any of the above sets.

In large facilities or wide area networks (WAN), where devices are physically located great distances apart, this feature should be used carefully and with coordination so as not to adversely affect other system users who are sharing the same exclusion/page/keypad set.

Changes to a set are sent to all device configurations sharing the set when the user selects the **Modify** button on the OUI screen for the type of set being edited.

In the case of Level Exclusion sets, users should also be careful when excluding Levels to ensure the desired Tally Level is not excluded. In the case of control panel default tally Levels the OUI indicates the default tally Level by turning the appropriate Level button indicator yellow. The hover help also indicates which Level is the configured default tally Level. If users desire, they may exclude the default tally Level and the OUI will display a choice to cancel or accept the suggested system change of reconfiguring the default tally Level to the first lowest (1-32) Level not excluded. This will only change the default tally Level on the panel configuration

being edited; it will not change the default tally Level on the other panel configurations sharing this Exclusion Set.

**Note**   Level Exclusion Sets require a minimum of one Level to always be available (not excluded). Attempts to exclude all system Levels will be rejected by the OUI with a warning message. The Exclude All button by default excludes all Levels (for faster configuration) except the panel's default Tally Level. For RCL Clients the OUI excludes all Levels by default except Level 1.

After saving the Exclusion Set change, users must also save the panel configuration change of default tally Level (the OUI will prompt users and provide an option to save the panel configuration if they forget to save these changes to the panel configuration).

## Salvo Button Configuration

When changing button type assignments from the OUI for **Salvo Select** buttons, you must be sure to select a valid Salvo for the button. Otherwise, during configuration the button is assigned a NO_BUTTON type to avoid the possibility of triggering an unwanted Salvo Take operation.

## Control Panel Self Configuration

The Self Configuration feature allows re-configuration of any available Source/Destination/Salvo/Level select buttons from the control panel itself. This feature is available on Encore BPS, KMD, and P48 panels. The **Self Config Lock** flag must be OFF to activate this feature on the panel.

Pressing the **AllLvl/CFG** control panel button for 5 seconds puts the panel in Self configuration mode. In this mode Source/Destination/Salvo/Level select buttons can be reconfigured for any available Source/Destination/Salvo/Level using the Level/Previous and Level/Next buttons to scroll through available items on the control panel.

1.  Using the Encore UI, configure a panel button with **AllLvl/CFG** and two other panel buttons as **Level/Prev** and **Level/Next**.

2.  Press and hold the **AllLvl/CFG** button for 5 seconds. That button will go high tally and the panel displays SRC CONFIG.

3.  Press a **Source**, **Destination**, **Salvo**, or **Level Select** button to be configured. That button will flash, and the panel displays the current selection for that button.

4.  Press the **Level/Prev** and **Level /Next** button to browse through the available items. Leave the desired item displayed on the panel.

5.  Press the previously selected **Source**, **Destination**, **Salvo**, or **Level Select** button to configure the displayed item for that button.

Only the **AllLvl/CFG**, **Level/Prev**, and **Level/Next** buttons are active in Self Configuration mode. The panel reports NOT USED if any other buttons are pressed.

# Control Panel Grouping

Control panel grouping allows multiple panels to be logically combined together to form a single larger control panel. This feature is typically used when more button functions are desired than are available on particular type of panel. For example, the number of direct access Sources and Destinations can be increased. A panel group consists of one Master panel and one or more Expansion panels.

The Panel Server treats any button press command from within a panel group as if it was generated from a single physical control panel. Each panel belonging to a defined panel group will behave according to the configuration of the Master panel of the group. All Take, Lock/Protect, or Level requests, and error responses are directed from and to the Master panel of the panel group. The behavior and response time of all panels within a panel group will match that of a standalone control panel. Operational and diagnostic messages (e.g. in case of Lock or Protect) will only show the Master panel name, not the Expansion panel(s).

A single Panel Server can control a total of 64 grouped control panels and an additional 64 control panels that are not assigned to panel groups. The grouped control panels can be in a single group of 64 panels, or 32 groups of two panels, or any combination of groups as long as the total number of grouped panels does not exceed 64. Grouped panels have to be on the same Panel Server, but the panels in a group do not have to be in the same rack or even the same room.

Encore groupings include 48B + 48B, BPS + 48B, XY + 48B, and UCP + Client panels. A 48B panel can be either a standalone, or a Master, or an Expansion panel, but cannot be more than one of those or a member of more than one panel group.

**Note**     To remove a control panel from being a Master of a group all Expansion panels must first be removed from the group before the Master will be allowed to be removed. This prevents leaving Expansion panels without a Master panel.

## Panel Grouping Configuration Process

The Master control panel of a group must be configured first before configuring Expansion panels.

Once the panel is defined as a Master the **Configuration Attributes and Flags** screen title will change to **Control settings of Panel Group Panel Group Name** to denote the panel is the Master of a panel group. These settings will apply to all the panels in the panel group. All Expansion panels belonging to a

defined Master panel group will behave according to the configuration of the Master panel.

Once the panel is defined as an Expansion panel the **Configuration Attributes and Flags** screen title will change to **Expansion panel of Panel Group Panel Group Name**. The only available setting is **Panel Group Name**. All Expansion panels belonging to a defined Master panel group will behave according to the configuration of the Master panel.

## Panel Group Identification

You can use the Panel Edit screen to verify which panels belong to a group. All panels belonging to a panel group have the name of the panel group pre-appended to the name of the panel. The Master panel of the group will have the same name as the pre-appended group name (Figure 140).

*Figure 140.  Panel Edit Screen*
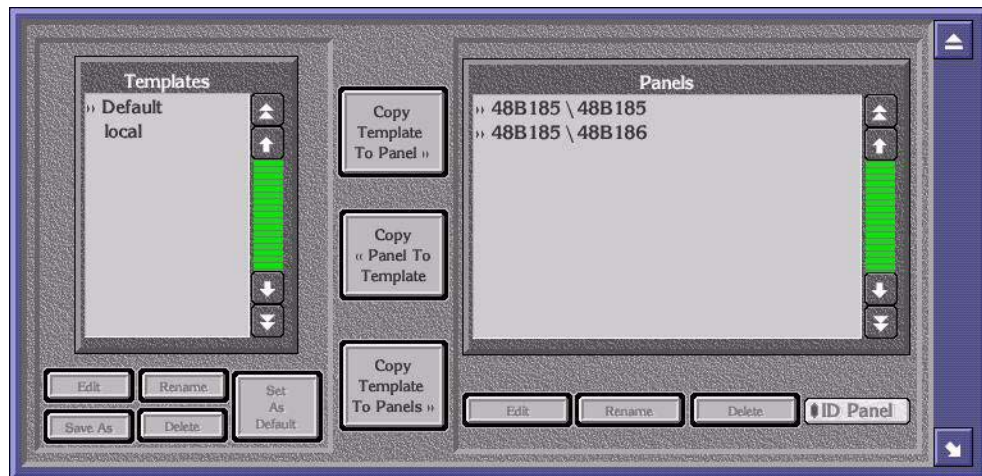


Another way to physically identify panels belonging to a panel group is to flash all of the panel group's buttons using the **Backlight** button in the Master panel's **Control settings of Panel Group Panel Group Name** screen. Clicking the **Back-light** button will turn on and off the panel button lights on all the panels belonging to the group. By observing the physical panels while performing this step it will be easily recognizable which panels belong to the Master panel being edited.

## BPS + 48B Grouping Configuration Example

In a BPS + 48B configuration, the buttons of the 48B panel are treated as 48 extra buttons added to the 32 assignable buttons of the BPS panel.

The BPS feature which allows the operator to assign dynamically (from the panel itself) Sources to buttons is supported by the 32 buttons of the BPS panel and the 48 buttons of the 48B panel.

*Figure 141. Example of BPS + 48B Panel Group.*
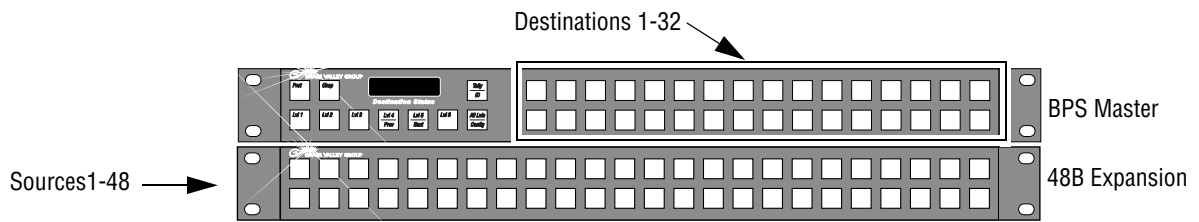


1.  Log in to the CP Server application.

2.  Configure the BPS Master panel:

    a.  Go to **Encore Panels > BPS > Select**. Select the BPS panel that will be the Master panel.

    b.  Go to **Configure BPS Flags > Panel Group Name**. This will display the Panel Groups names list. Select the name of this BPS panel.

    c.  Configure the individual buttons as desired.

        For example, you could configure all 32 assignable buttons for Destination selection. See Figure 141.

    d.  When finished configuring, select **Modify** to save the configuration changes.

3.  Configure the 48B Expansion panel:

    a.  Go to **Encore Panels > 48B > Select**. Select the 48B panel that will be the Expansion panel.

    b.  Go to **Configure 48B Flags > Panel Group Name**. This will display the "Panel Groups names list." Select the name of the BPS panel that will be the Master of the panel group.

    c.  Configure the individual buttons as desired.

        For example, you could configure all of the 48 buttons as Source Select buttons. In this case, selecting a Source button on the 48B would execute a Take operation on the controlled Destination of the BPS. See Figure 141.

    d.  When finished configuring, select **Modify** to save the configuration changes.

As soon as a 48B control panel is configured as the Expansion panel of a BPS panel, its "Configure Flags" window will no longer be configurable (except for the Panel Group Name field).

The Expansion panel button configuration screen will now show the following message: "48B Expansion panel of Panel Group BPS*<BPS name>*." "Assignment" and "Selection" menus will have the same functionality as for the BPS 32 assignable buttons. All the BPS control panel attributes and flags will apply to the panel group.

## XY + 48B Grouping Configuration Example

In an XY+ 48B configuration, the buttons of the 48B panel are treated as 48 extra buttons added to the 18 assignable buttons on the XY panel.

Operational control panel name based messages (e.g. in case of Lock, Protect, or error messages) will only show the XY panel name.

*Figure 142. Example of XY+ 48B Panel Group.*
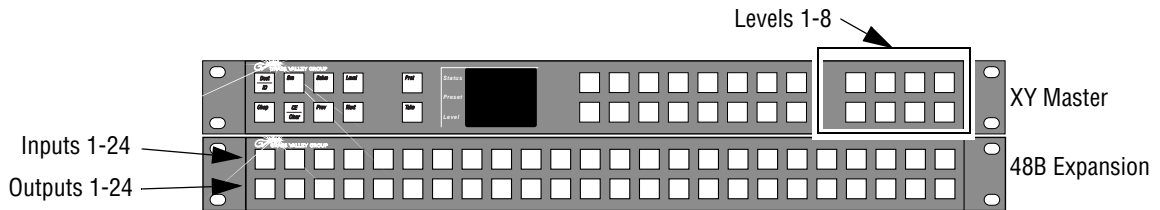


1.  Log in to the CP Server application.

2.  Configure the XY panel:

    a.  Go to **Encore Panels > XY > Select**. Select the XY panel that will be the Master panel.

    b.  Go to **Configure XY Flags > Panel Group Name**. This will display the "Panel Groups names list." Select the name of this XY panel.

    c.  Configure the individual buttons as desired.

        For example, you could configure the right-hand group of eight buttons for Level selection. See Figure 142.

    d.  When finished configuring, select **Modify** to save the configuration changes.

3.  Configure the 48B panel:

    a.  Go to **Encore Panels > 48B > Select**. Select the 48B panel that will be the Expansion unit.

    b.  Go to **Configure 48B Flags > Panel Group Name**. This will display the "Panel Groups names list." Select the name of the XY panel that will be the main unit.

    c.  Configure the individual buttons as desired.

        For example, you could configure the top row of 32 buttons for Source selection and the bottom row of 32 button for Destination selection. In this case, selecting a Destination on the 48B would allow control of that output from both the XY and 48B (Figure 142).

## 48B + 48B + 48B Panel Group Configuration Example

Three 48B panels can be grouped, to provide a total of 144 programmable buttons. One panel is the Master, the other two are Expansion panels.

*Figure 143.  Example of a Three 48B Panel Group*
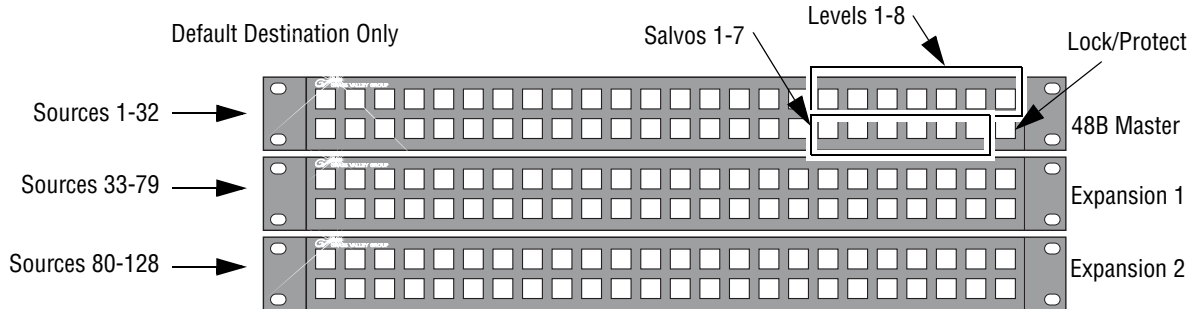


1.  Log in to the CP Server application.

2.  Configure the 48B Master panel:

    a.  Go to **Encore Panels > 48B > Select**. Select the 48B panel that will be the Master panel.

    b.  Go to **Configure 48B Flags > Panel Group Name**. This will display the Panel Groups names list. Select the name of this 48B panel.

    c.  Configure the individual Master panel buttons as desired.

    In this example the total of 144 buttons available can be assigned to Sources, Destinations, Levels, Lock/Protect, etc. The 48B control panel can be assigned a default Destination without having to assign a button, so you could have 128 Sources to a single Destination, several Levels, a Lock/Protect, and some Salvos all in the same control panel group (Figure 141).

    d.  When finished configuring the Master panel buttons, select **Modify** to save the configuration changes.

3.  Configure the first 48B Expansion panel:

    a.  Go to **Encore Panels > 48B > Select**. Select the 48B panel that will be the first Expansion panel.

    b.  Go to **Configure 48B Flags > Panel Group Name**. This will display the "Panel Groups names list." Select the name of the 48B panel that will be the Master of the panel group.

    c.  Configure the individual buttons as desired. In this example, they are all Source buttons, starting with Source 33 (Figure 141).

    d.  When finished, select **Modify** to save the configuration changes.

4.  Configure the second 48B Expansion panel as above, but start with Source 80 as the first Source button.

# Control Panels and Areas

Larger Encore systems may be divided into multiple Areas to allow partitioning control of the system (see *Multiple Area Encore Systems* on page 89). Control panels can be allowed to access all Areas of a system.

**Note**     Tie-lines must be configured and available to route Sources in one Area to Destinations in a different Area (see *Section 7-Tie-Line Manager*).

If control panel access to all Areas is not desired, various methods are available to restrict panel access.

*   Area Exclusion Sets can be created that specify which Areas a panel can access when it is being configured. This makes it easy to set up the panel to access just one Area, only a some of the facility's Areas.

*   Destination Exclusion Set can also be created and assigned to panels to restrict specific Destinations of specific Areas.

*   Control panels with keypad sets (PMB, XY, UCP, etc.) can be managed with the **Keypad Local Source** and **Keypad Areas** parameters, which specify allowed Areas. These panels always indicate in some manner which Area the Selected Source or Destination belongs to. The XY panel only shows the Area name when the Source is in a remote Area.

*   Control panels with scrolling displays (like PMB and XY panels) have Prev and Next keys can be used to scroll through Sources and Destinations one Area at a time.

## Configuring Control Panels to Access All Areas

The default configurations for control panels allow access to all Areas, and so additional configuration may not be required. However, you can check the settings are correct with the following procedure:

1.  While logged into the CP Server application controlling that control panel, select the target panel category and type (for example, **Encore**, **XY**).

2.  Select the individual panel.

3.  Select **Configure Flags** to access the Attributes and Flags menu.

4.  Make sure the **Area Exclusion Set** parameter is **Default**. This set excludes no Areas.

5.  The panel will then be able to be configured with Sources and Destinations in all Areas.

**Note**     Destination Exclusion sets can affect panel access, and panels with keypads may also have other restrictions, as explained below.

## Configuring Control Panels for Specific Area(s)

### Panels Without Keypads (48B, BPS, etc.)

1. Follow steps Step 1 to Step 3 on page 236 to access the Attributes and Flags menu for the desired control panel.

2. Click on Area Exclusion Set. A menu similar to Figure 144 will open.

*Figure 144. Area Exclusion Set Menu*
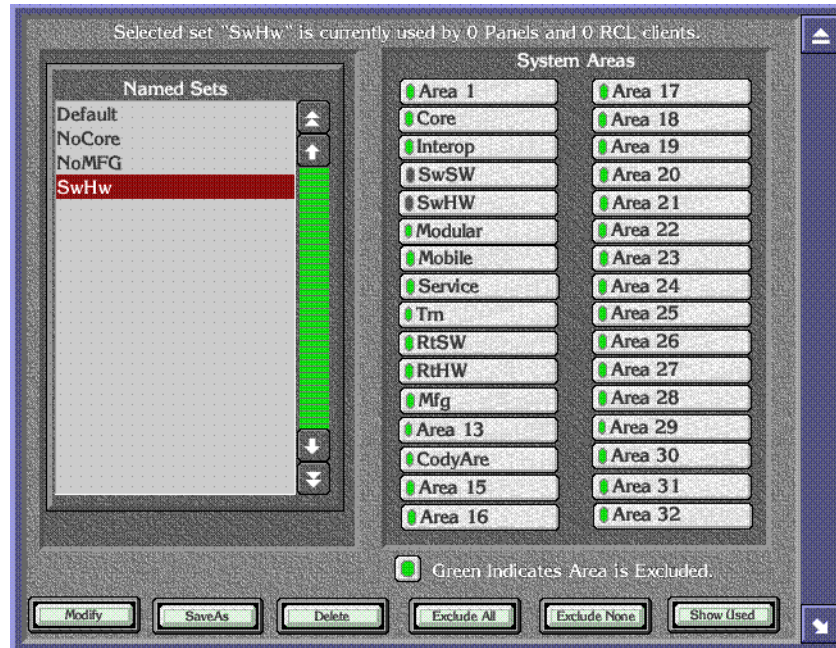


3. Select the **Default** Named Set, click **Save As** and give the new set a descriptive name.

4. Click all the System Areas you wish to exclude so that their green indicators are On. You can click **Exclude All** or **Exclude None** to quickly select or clear multiple Areas as a starting point.

5. When all the Areas to exclude all selected, click **Modify** to save the changes to the Exclusion Set.

6. Exit the menu. That Area Exclusion set will now be assigned to that panel. Sources and Destination in the excluded Areas will not appear in the selection panes used to configure that panel.

7. Configure the panel buttons with the desired Sources and Destinations in the available Areas.

8. When done with the panel configuration, click **Modify** to save the changes.

Once an Area Exclusion set has been created and defined, it can be used by any control panel.

**CAUTION**  If an Area Exclusion set in use is edited, all panels using that Exclusion Set will be affected.

### Panels with Keypads (XY, PMB, etc.)

You can also restrict name keypad searches on these types of panels.

**1.** Follow the *Panels Without Keypads (48B, BPS, etc.)* procedure on page 237 to configure any Source and Destination buttons on that panel in only the desired Areas.

**2.** In the Attributes and Flags menu, disable the **Keypad Local Source** flag in order to configure the Keypad Searchable Areas attribute.

**3.** Select the **Keypad Area(s)** field. This will display a menu similar to that shown in Figure 145.

*Figure 145.*
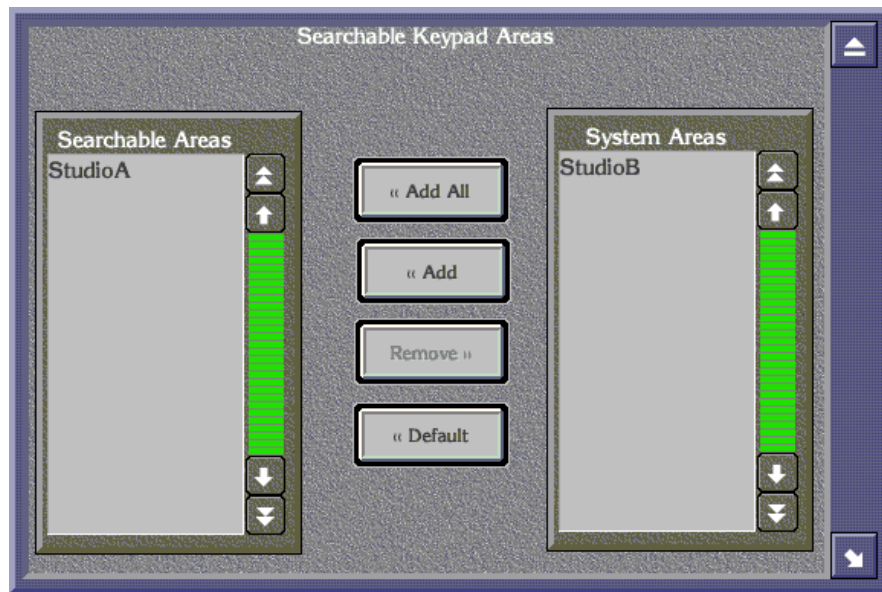


**4.** In the System Areas box, select the desired Area (e.g. "StudioA").

**5.** Select **Add** to move the selection to the Searchable Areas box.

**6.** If there are Areas where the panel should not be able to search, remove them. This only affects keypad prefix/suffix entered searches for presetting Sources and Destinations.

**Note**  Using the prev/next button without a keypad entered prefix/suffix will access all Sources in all Areas in Source mode and only Destinations not excluded in Destination mode.

7.  If you would like keypad-entered Source searches to only search the controlled Destination Areas, re-enable the **Keypad Local Source** flag. Otherwise keypad-entered prefix/suffix Source names will search the currently controlled Destination Area(s) and the Areas defined in the "Keypad Area(s)" attribute.

8.  Close the windows and select **Modify**.

## Joystick Override Configuration

Some control panels have GPI connectors that can be used for Joystick override. Joystick override permits switching video momentarily to another Source, and then returning to whatever Source was previously selected. This feature is typically used for camera matching.

The following control panels support Joystick Override:

*Table 25. Joystick Override Panels*

| Encore panels | BPS, 48B, JEP-100 |
|---|---|
| SMS panels | P32, P48 |
| Kalypso panels | KMD, KSD |

Joystick override is configured using Source buttons on the individual panel configuration screens, using the standard practice of clicking on a button and selecting the Source to be used for override. An example with these Joystick override buttons is shown in *48B (48 Button)* on page 242.

# Available Panel Configuration Screens

## Encore Model Panels

### BPS (Button Per Source)
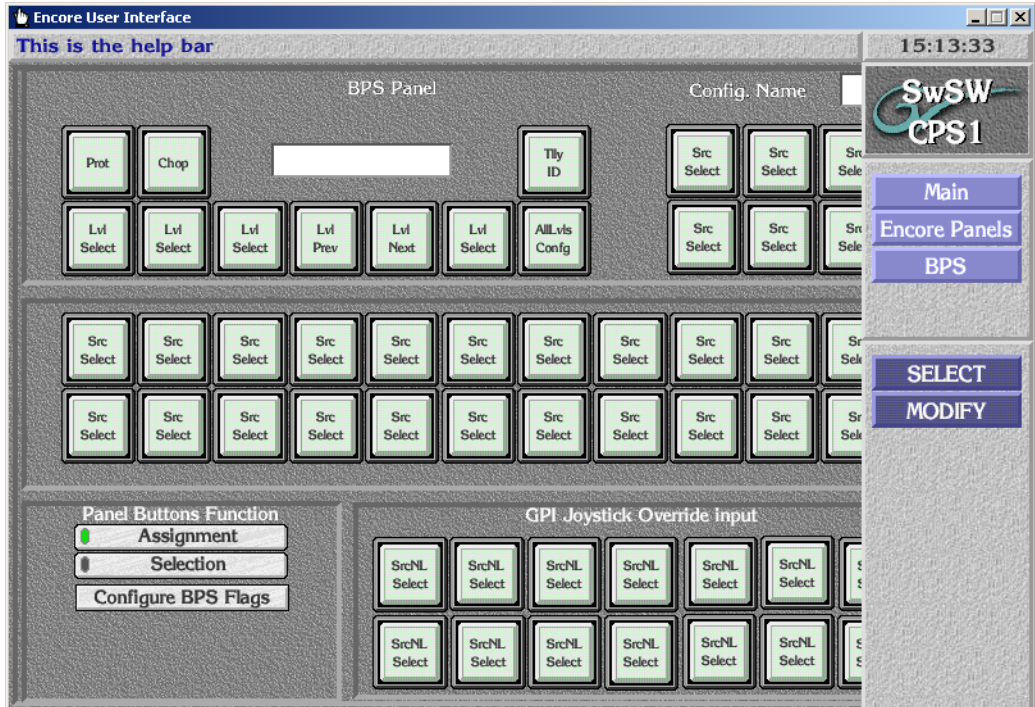
## PMB (Paging MultiBus)
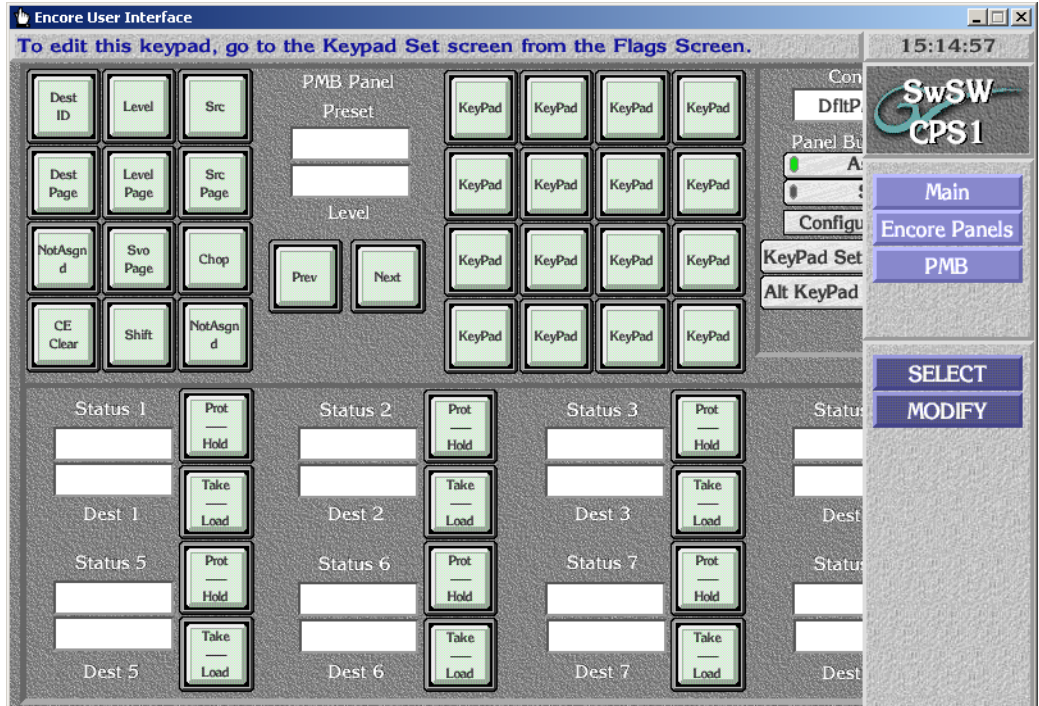


## XY
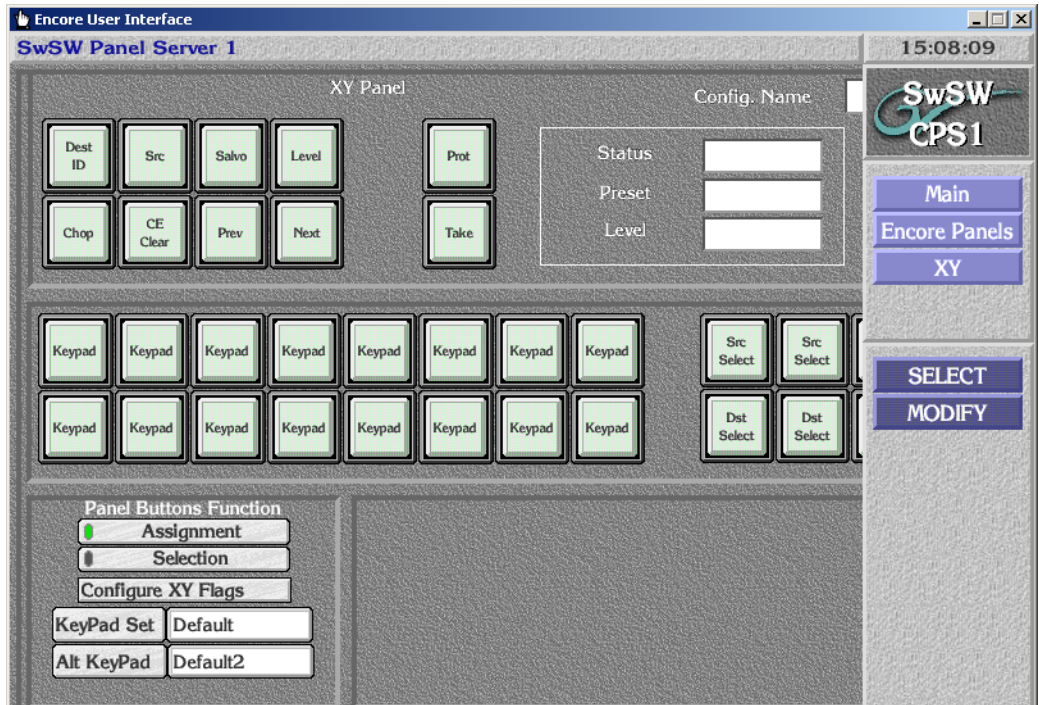
## 48B (48 Button)
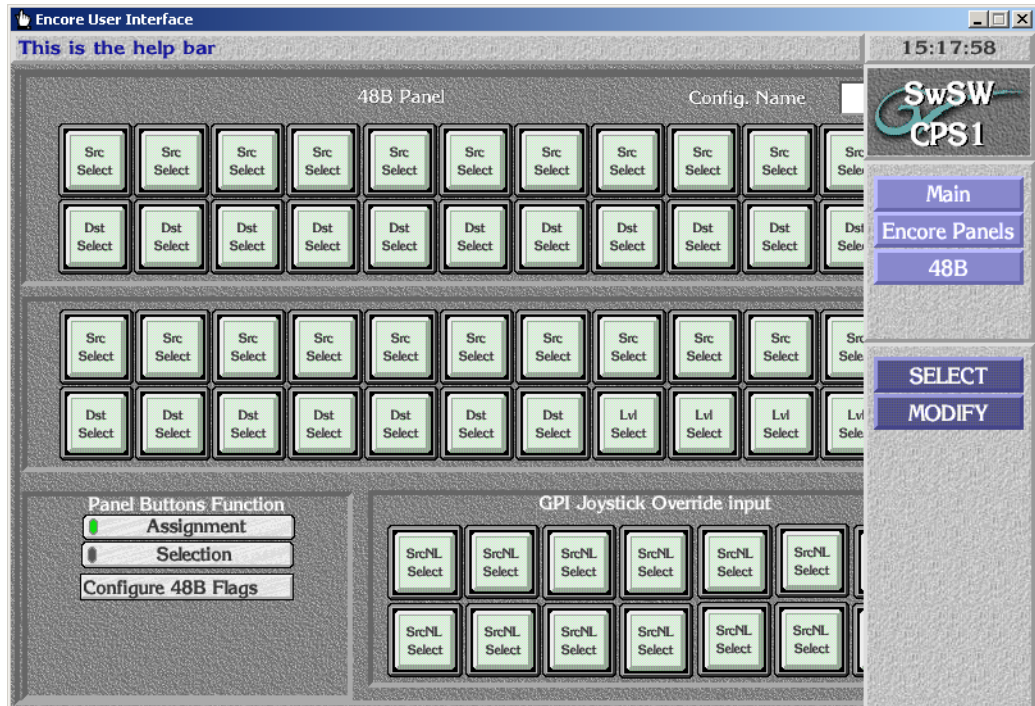


## UCP (Encore Universal Control)
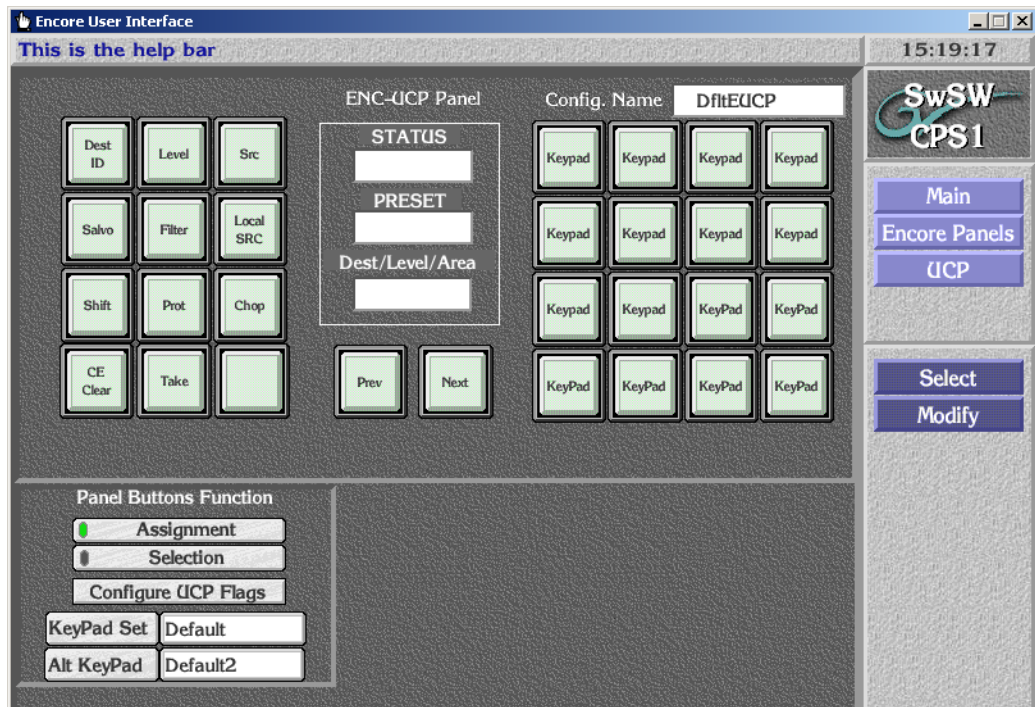
## CLNT (Encore Universal Control)
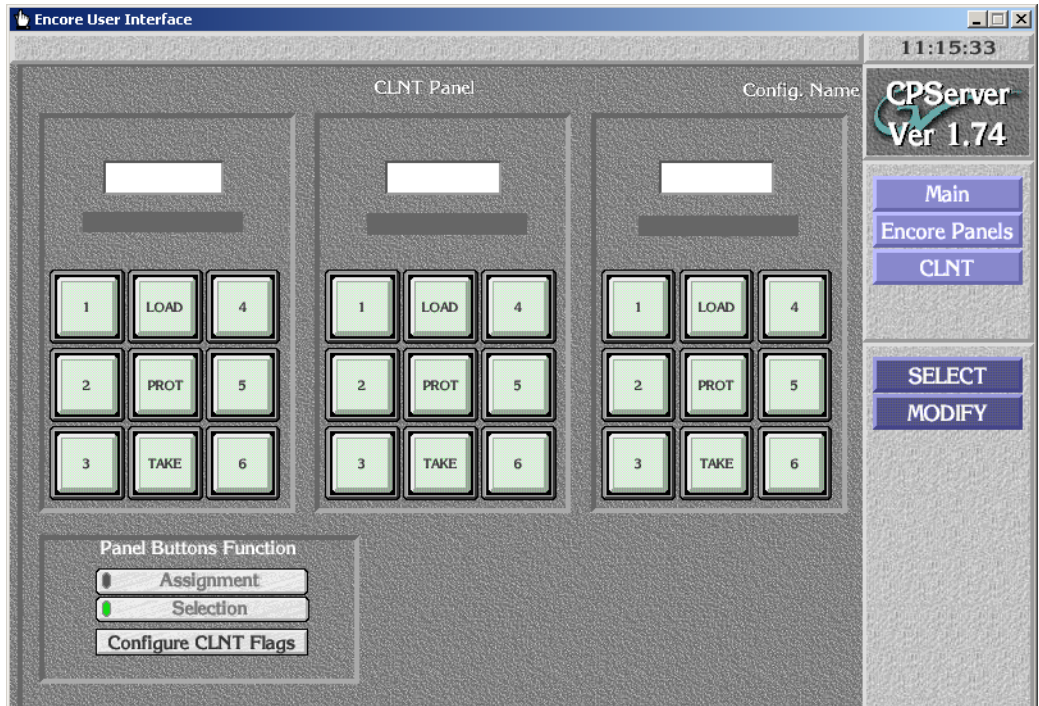


An Encore Client panel only operates with an Encore UCP panel that has been configured as a group master. See page 231 for panel group configuration procedures. Destinations are assigned to each of the three Client panel keypad using the Default Dst/Page flag (Figure 146).

*Figure 146. Encore Client Panel Destination Assignment Screen*
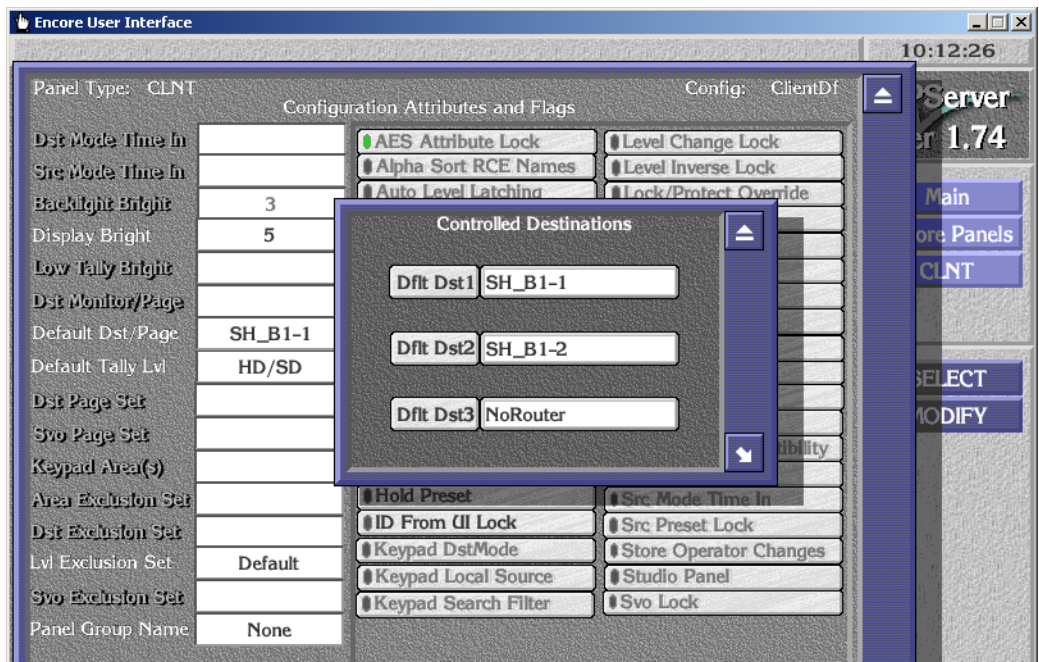
## JEP-100 Panel

### Routing Control System Mode Selection

The JEP-100 panel can be operated with either Encore or Jupiter control systems. For Encore operation, the proper software must be loaded onto the panel (older Jupiter only software cannot be used). The **Encore** Routing Control System Mode setting must also be selected on the JEP-100 Panel Network Configuration web page (Figure 147). A reset is required to change operating mode. This can be done by checking the **Do Reset** box at the bottom of the web page before clicking the **Save New Settings** button.

*Figure 147.  JEP-100 Panel Network Configuration Web Page*



**Note**        Additional steps may be required to convert a JEP-100 panel between Encore and Jupiter system control. Contact Grass Valley Support for specific information on panel conversion.

## JEP-100 Panel Configuration

The JEP-100 panel is configured using the Encore Panel Server application. Many configuration modifications occur in real time, so changing Panel Server settings can immediately be reflected in the operation of that panel.

The JEP-100 panel is represented with three screens. The left and right screens are shown in Figure 148 and Figure 149. The middle screen shows the buttons in the center of the panel.

Clicking on the arrow buttons on the OUI screen, or using the left/right arrow computer keyboard keys, accesses different panel screens.

*Figure 148.  JEP-100 Panel Server Left Configuration Screen*
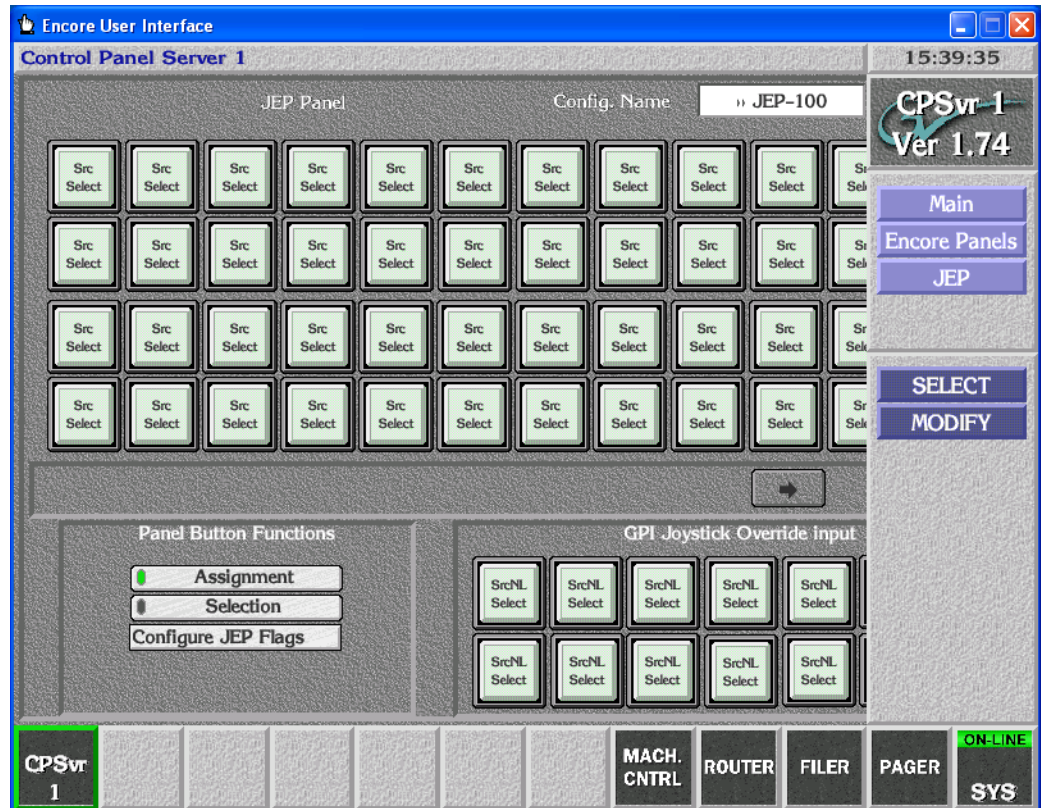
*Figure 149.  JEP-100 Panel Server Right Configuration Screen*
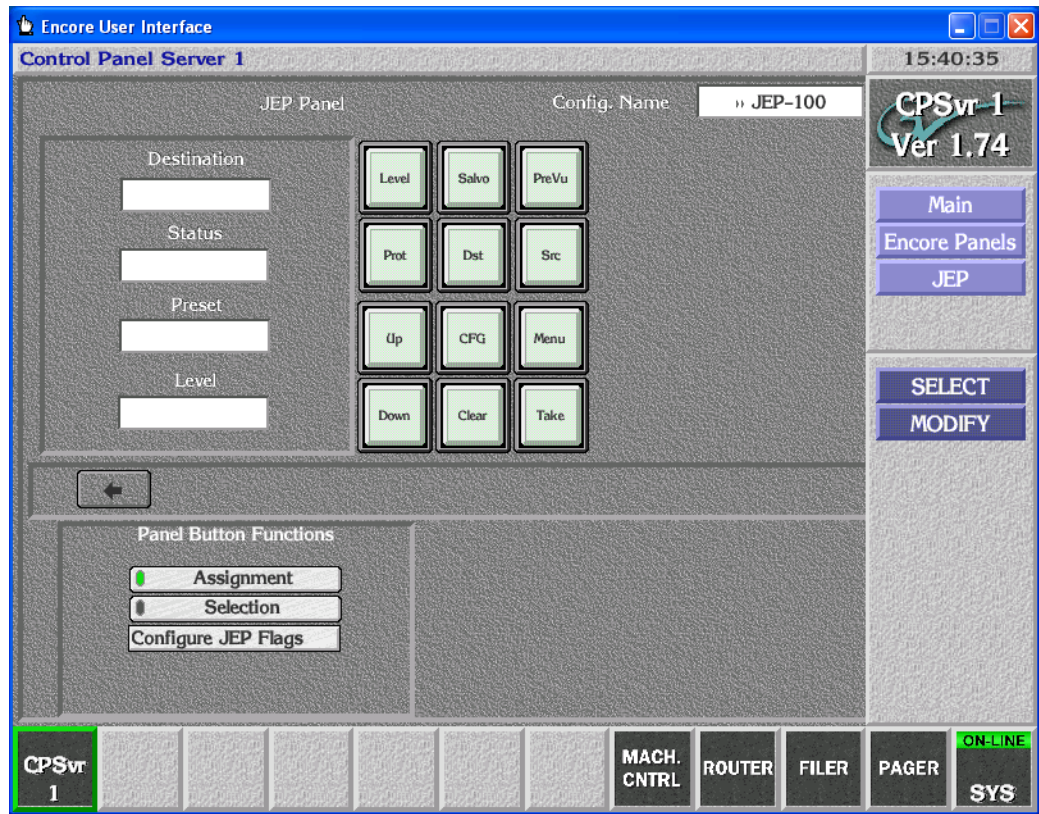
The JEP-100 panel is configured using the standard Encore procedures (selecting the panel to edit, assigning button functions, selecting Sources and Destinations, and configuration flags (Figure 150).

*Figure 150.  JEP-100 Attributes and Flags Screen*
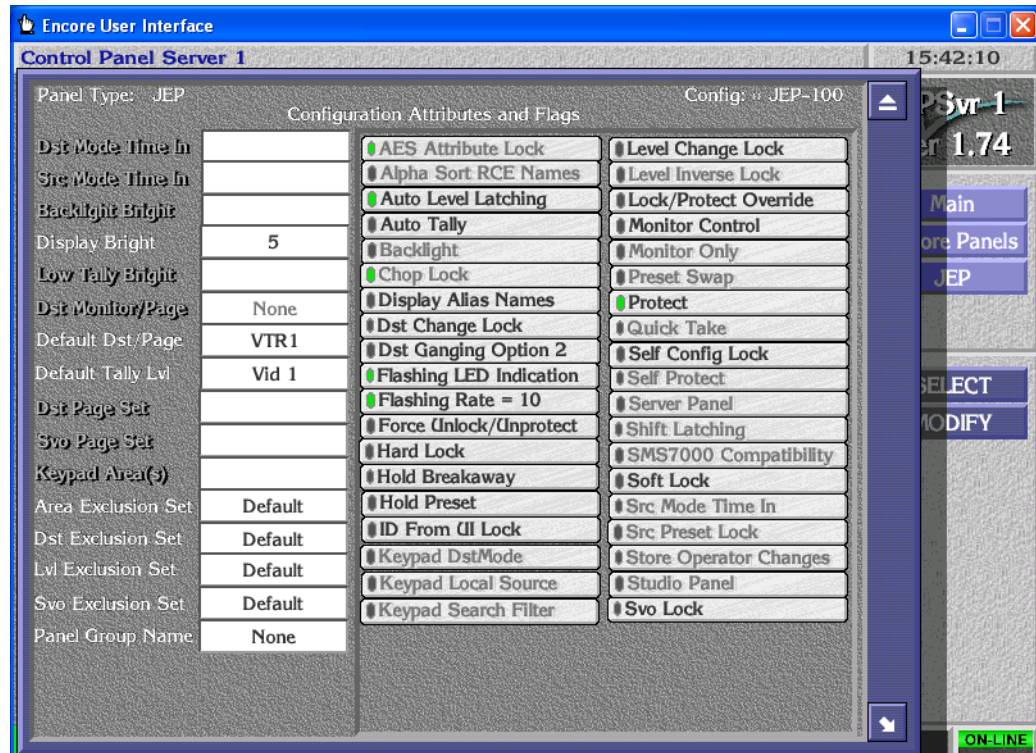


## Copy Panel Template Control

For the JEP-100 panel only, a control panel template can be created that will not change the Default Destination, and will not change selected button assignments. This is accomplished using the Control Panel Server:

**1.** Select a JEP-100 template file for editing. Note that the default template cannot be edited. You can create an editable default template by saving a copy with a new file name.

**2.** To retain the panel's Default Destination, select **No Change** on the template's Dflt Dst/Page list (Figure 151).

*Figure 151.  Template No Change Default Destination*
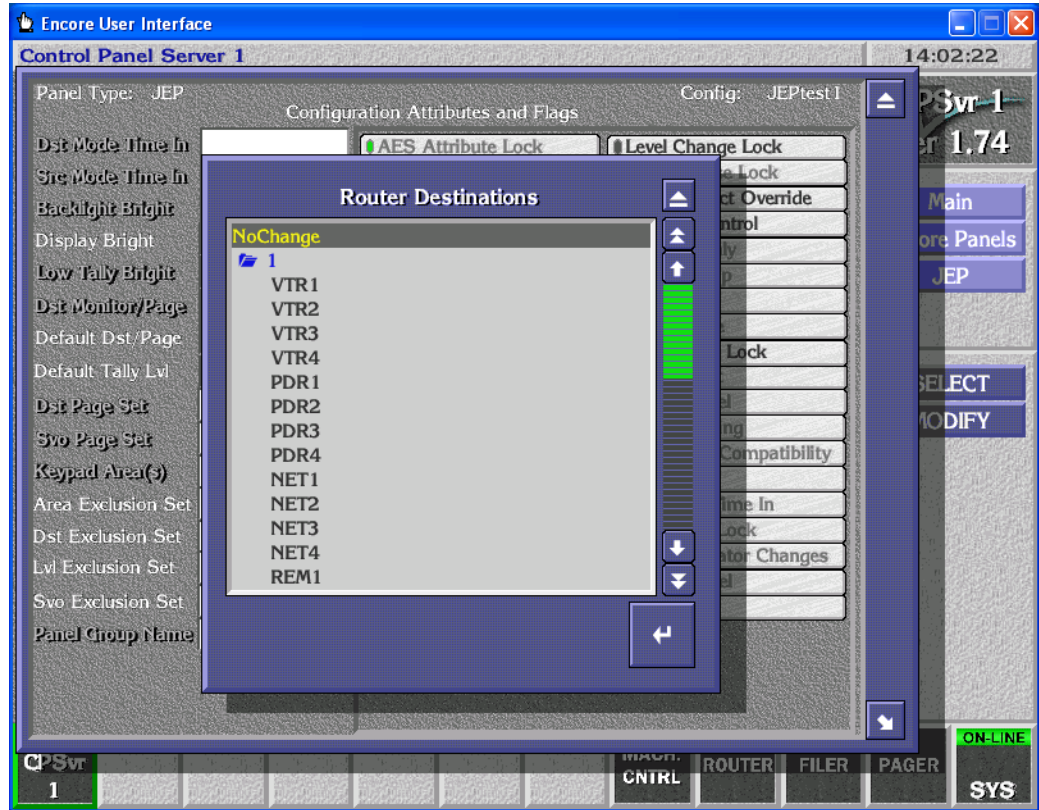
**3.** To retain a particular button's function, with button Assignment active select **No Change** for the desired button (Figure 152).

*Figure 152.  Template No Change Button Assignment*



**4.** Save this template file.

**5.** Copying this template to a JEP-100 panel will leave the **No Change** items unchanged, but will modify the rest of that panel's configuration.

## Display Level Tally

The JEP-100 panel allows configuration of level tally in the front panel displays when the panel is in Source mode. Clicking on the representation of a display (Destination, Status, Preset, or Level) brings up a Router Levels window (Figure 153).

*Figure 153.  Router Level Selection for Display Tally*
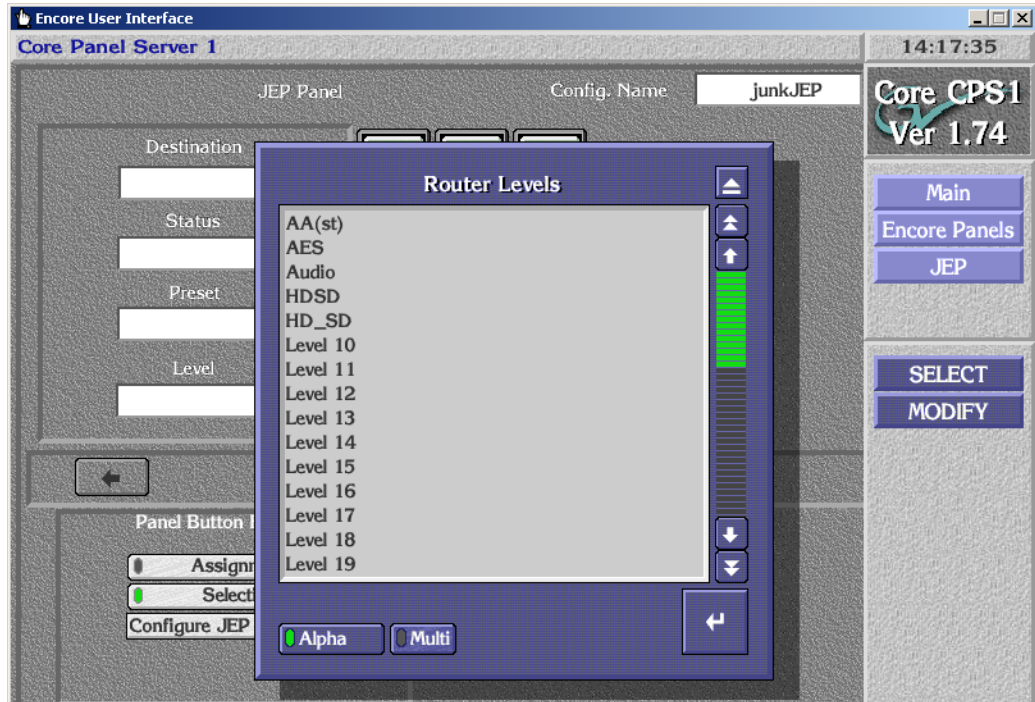


Selecting a level will make that display show the source name of that Level. More than one Level can be selected, in which case the display you selected and the displays below it will show Level statuses. For example, clicking on the second (Status) display, and choosing three Levels from the list will make the top display continue to report Destination, and the lower three displays will report the Source names of those three Levels.

Normal JEP-100 panel operation, like scrolling through available Sources, is still supported. The display will temporarily show the list of Sources while scrolling, but when done the display will time-out after a short time and re-display Level tally.

# Kalypso Model Panels

## KMD (Kalypso Multi Destination)
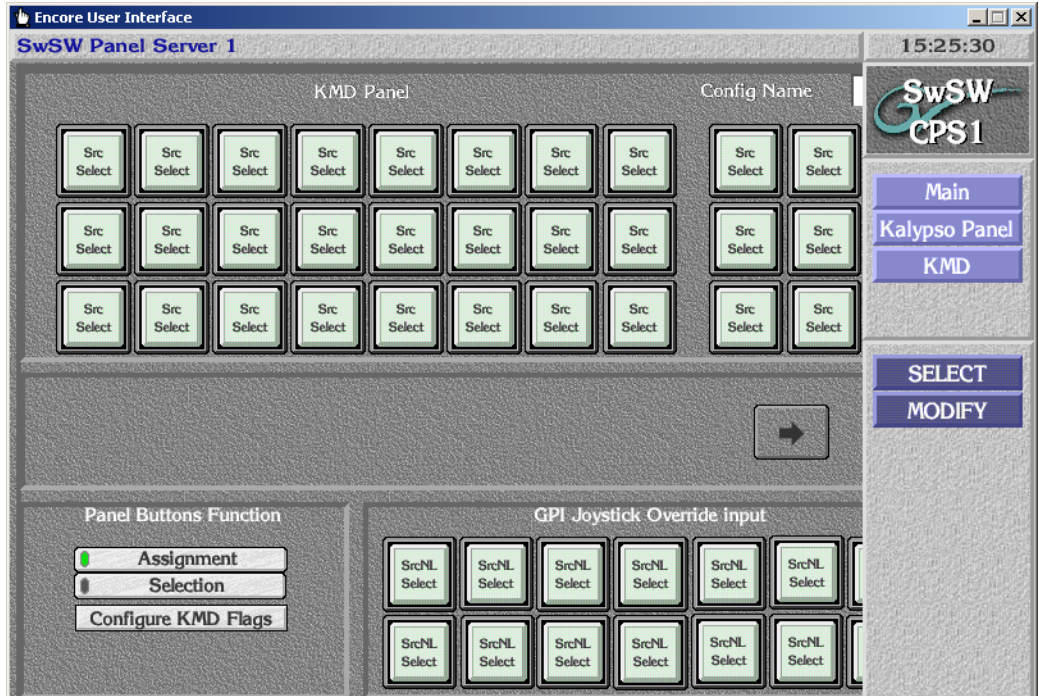


Clicking on the arrow buttons on the OUI screen, or using the left/right arrow computer keyboard keys, accesses different panel screens.

## KSD (Kalypso Single Destination)
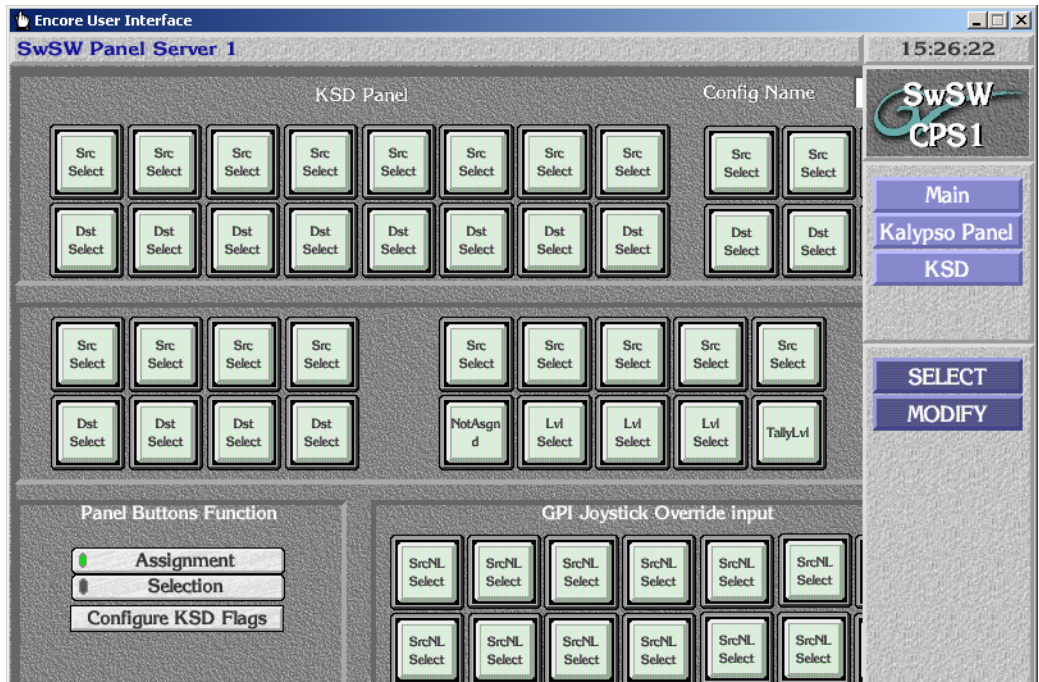
## SMS Model Panels

### UCP (SMS Universal Control) Panel
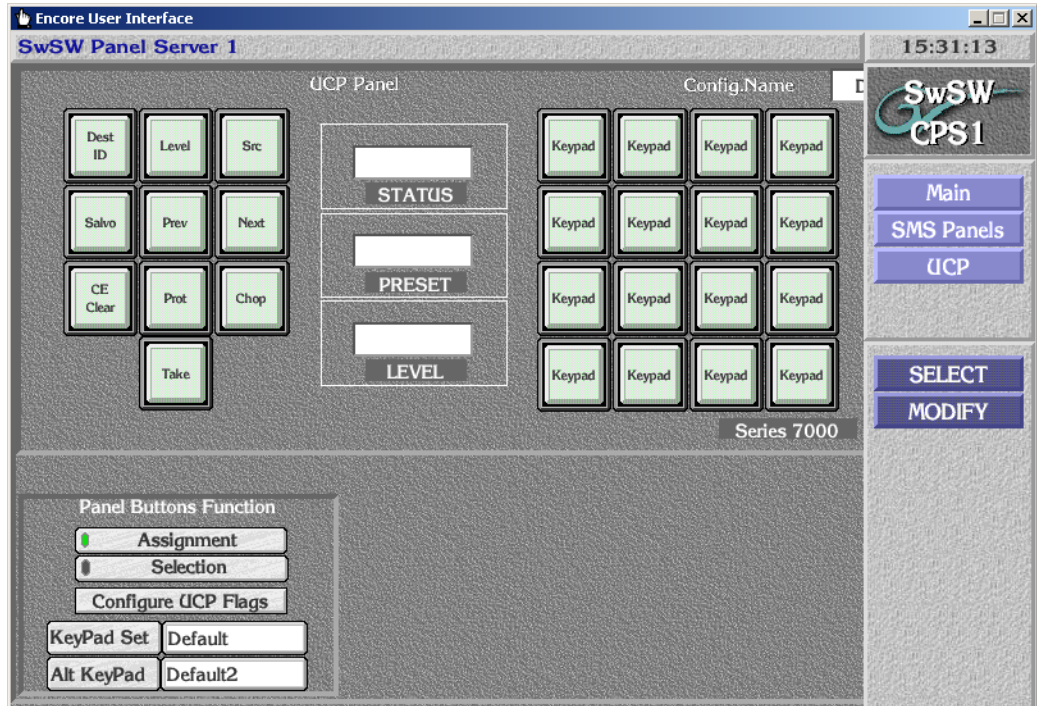


### EDP (8 Destination Paging) Panel
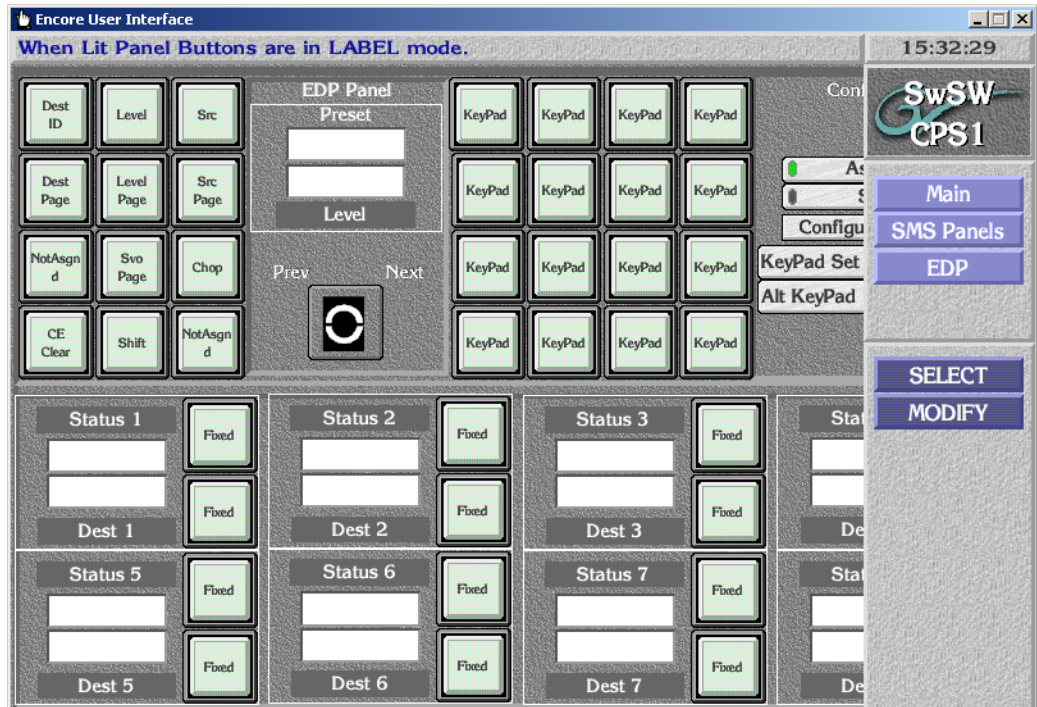
## P48 (48 Button) Panel
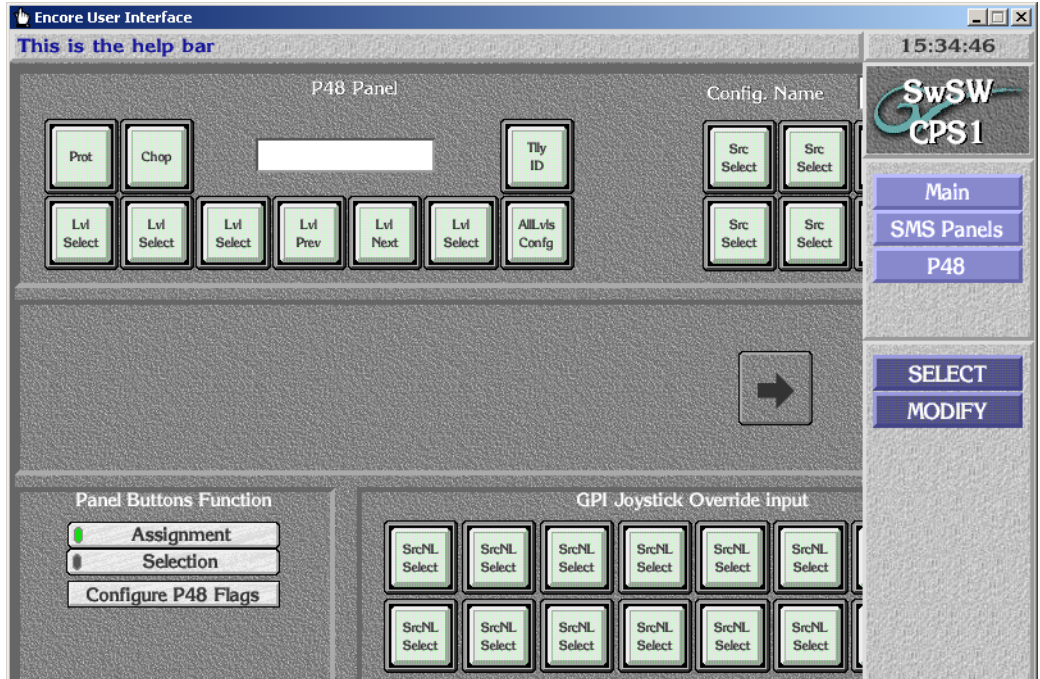


Clicking on the arrow buttons on the OUI screen, or using the left/right arrow computer keyboard keys, accesses different panel screens.

## MB8 (Multibus 8) Panel
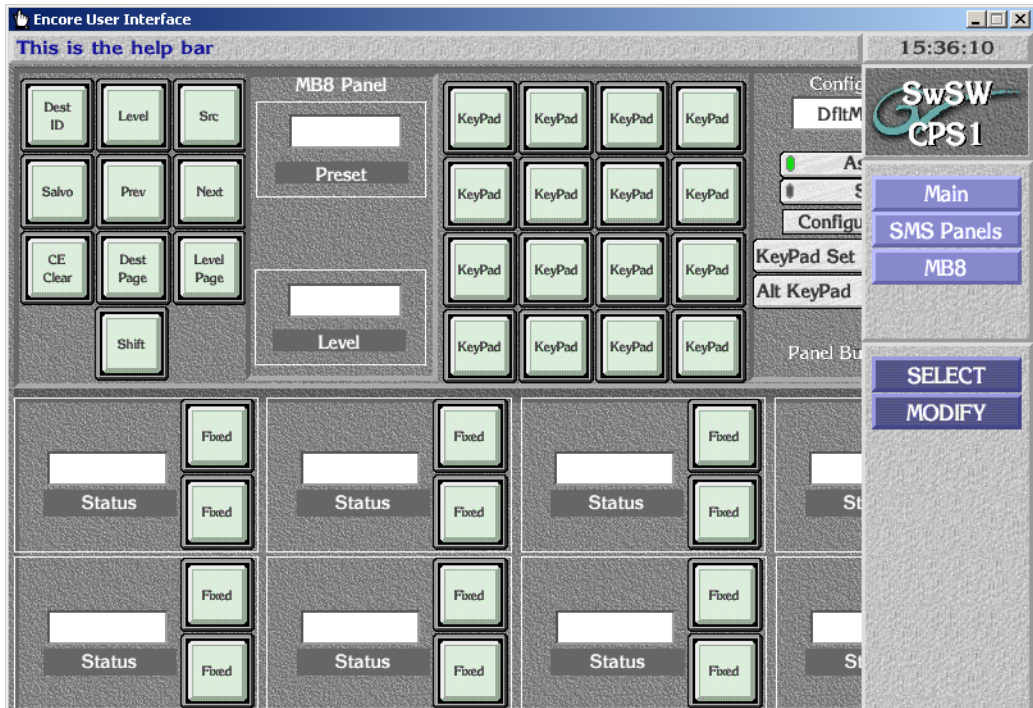


## P32 (32 Button) Panel
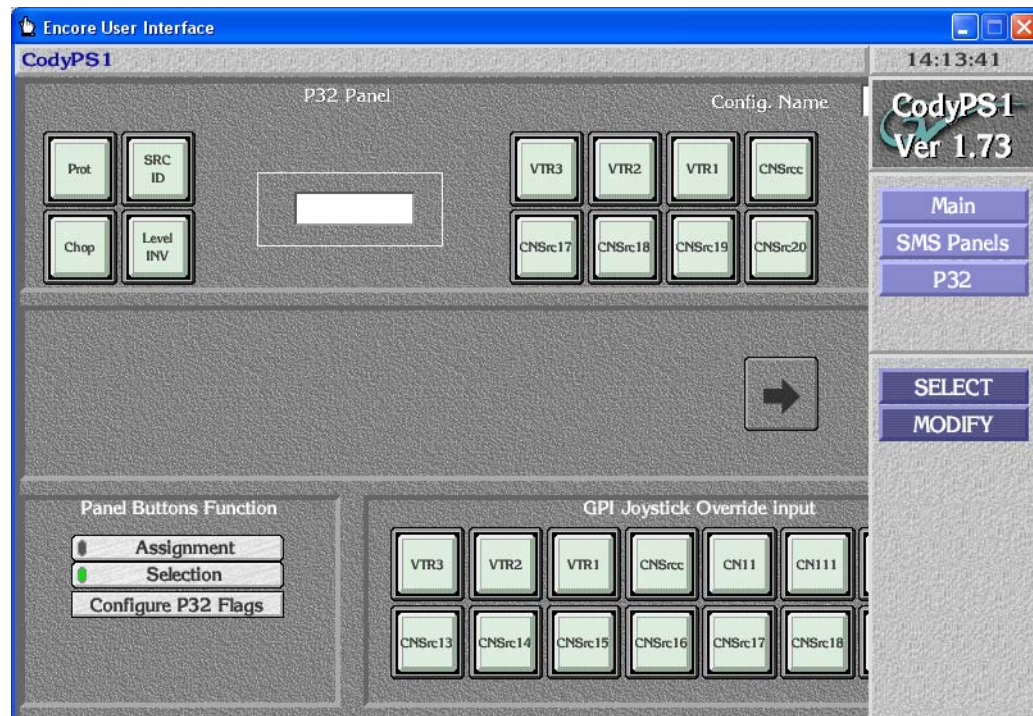


Clicking on the arrow buttons on the OUI screen, or using the left/right arrow computer keyboard keys, accesses different panel screens.

### P32 Panel Enable Assignment Limitation

P32 SMS style control panels can be set to Level mode. Under SMS7000 control Level mode makes the 32 buttons on the right select Levels instead of Sources. Under Encore control, functions can be assigned to any button on the P32 panel. However, if the Panel Enable function is assigned to one of 32 buttons on the right, in Level Mode that button will not act as Level select, but instead acts as Panel Enable.

If you assign the Panel Enable function on a P32 control panel, assign it to one of the four buttons on the left side of the panel.

## MCO and COS Custom Panels and RIB Box

Two legacy custom GSC hardware panels (MCO and COS) and a custom interface (RIB Box) are supported by Encore 1.7.3 and newer software. These custom panels are not widely used and do not apply to most existing or new Encore systems.

# Under Monitor Display

Legacy SMS7000 Under Monitor Displays (UMD) are supported by Encore systems running version 1.7.3 and newer (Figure 154). A UMD reports the name of the current Source displayed on its associated monitor.

*Figure 154. Legacy Under Monitor Displays*
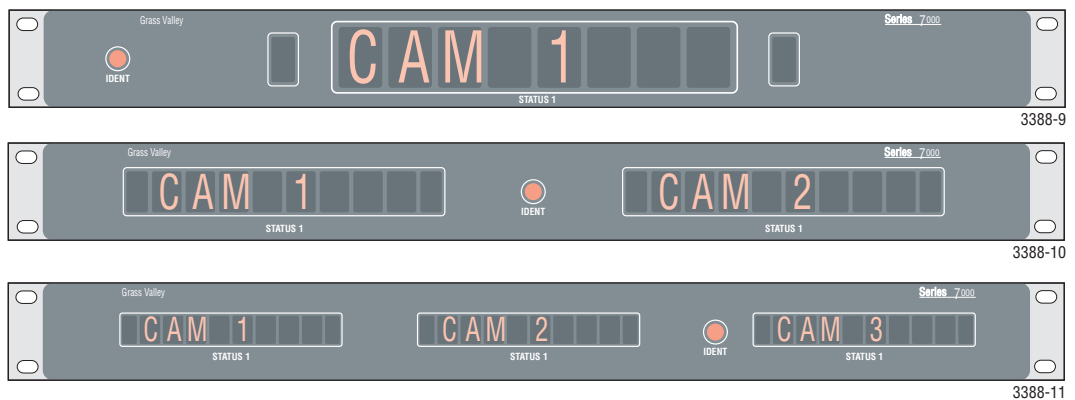


UMDs are installed the same as any SMS7000 GSC panels, using looped BNC connections.

The Encore system treats UMDs as SMS7000 Client control panels. To convert an SMS7000 UMD to Encore system operation, type: `lcpProgram` from the Encore console, which programs the panel. The UMD can then be configured with the Encore OUI by selecting the SMS7000/Custom/Client option. This brings up the Client control panel screen, which is also used to configure the UMD.

# RCL Server Application

The RCL Server application is embedded in the Control Panel Server application, and permits external control of the Encore system. The RCL Server application works with Client applications running on external devices. These Clients can then appear like control panels to the Encore system, allowing them to send commands to route Sources to Destinations. The client applications also receive routing status information and Source and Destination names for use by the external device (for example, to display on that device's user interface).

The RCL Server supports both the RCL (Router Control Language) and NP (Native) protocols. RCL and NP commands are documented in the separate *Routing Products Protocol Manual*.

## RCL Server Screen Description

Clicking on the RCL Server button displays the RCL Server Main Screen (Figure 155).

*Figure 155.  RCL Server Main Screen*
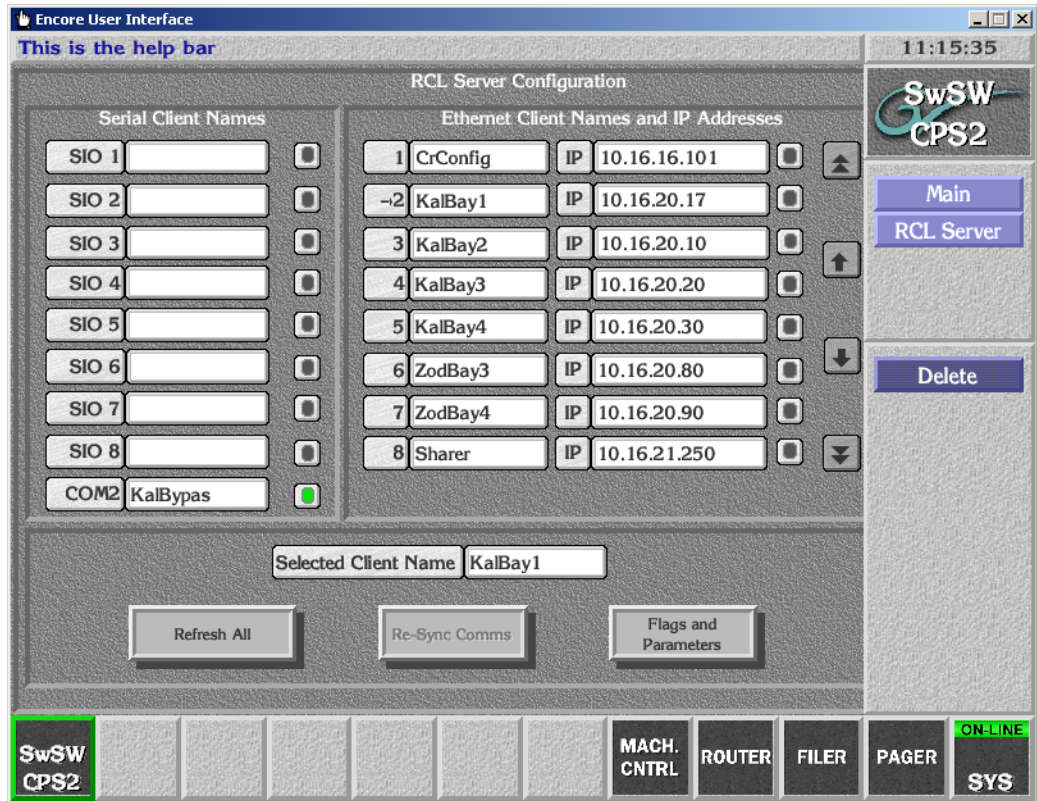
Serial Clients are listed on the left side of the screen and Ethernet Clients are listed in the middle of the screen.

- Clicking on a button selects that Client, adds an arrow to the button, and displays it in the **Selected Client Name** field below.

- Clicking on the name portion of a selected button opens a text entry window allowing the editing of the name of the selected Client.

**Note**    All RCL Clients must have unique names to prevent unpredictable behavior. RCL Client names also must not begin with any form of "com."

- Clicking on the **IP** field of a selected Ethernet button opens a numeric entry window allowing the setting of the IP address for the Client. This is the address the Server will use to communicate with the Client.

## Communications Indicators

Each Client button has a communications status indicator that is colored green under the following conditions:

- For Ethernet clients, the indicator is green if the client is connected.

- For RCL serial clients, the indicator is green if the serial port has been successfully opened and the client is connected. However, if the client later becomes disconnected, this cannot be detected so the indicator will not be turned off dynamically.

- For NP serial clients, the indicator is green if the server has successfully opened the port and is ready to receive and respond to the clients. Clients may or may not be connected at the other end, however. When a new NP serial client configuration is created, its indicator goes green only after clicking on the **Resync Comms** button, since that is when the port is actually opened. Otherwise, the port is opened and the indicator will go green at the next start up of the Panel Server.

## Disconnection and Notification

- The Encore RCL Server drops automation Ethernet client applied Protects if an Ethernet client disconnects from the server due to a broken Ethernet connection.

- The Encore RCL Server provides a console warning message and disconnects any automation client that exerts excessive load on the server. This prevents a mis-behaved automation client from adversely affecting the rest of the Encore system. After a serial client has been disconnected, the RCL Server connection status indicator for the dropped port will go red. Selecting that disconnected client and executing **Resync Comms** reinitializes the port, and if successful its indicator goes green.

### Delete

Clicking on the Delete button on the right side of the screen deletes the selected Client, removing its data from the RCL Server configuration stored on the Sharer PC and that SCB's flash memory.

- For Ethernet clients, the connection will also be disconnected.

- For serial clients, the port will be closed and Encore will not respond to any further queries sent by the client on that serial line.

### Refresh All

Clicking on the **Refresh All** button refreshes the connection status (shown by the green indicator beside for each client name) for all configured clients. If you believe that one or more clients may have connected after this screen was opened, you can click on this button to refresh the statuses.

### Resync Comms

For serial clients, clicking on the **Resync Comms** button makes the RCL server re-initialize communication with the selected serial client. The serial port is closed and re-opened, to ensure that any change in the serial port parameters take effect.

This button is disabled for Ethernet clients.

### Flags and Parameters

Clicking on the Flags and Parameters button opens a window with additional settings (Figure 156).

*Figure 156.  RCL Server Flags and Parameters*
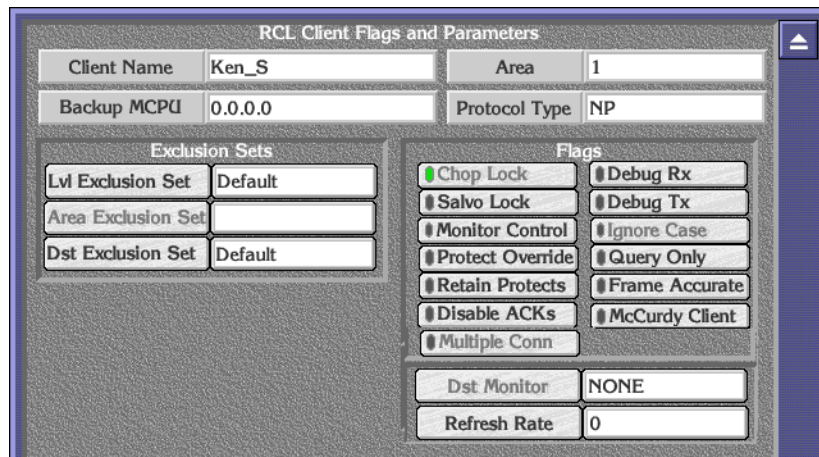


| Client Name | Displays the name of the currently selected Client application. |

| | | |
|---|---|---|
| | **Area** | Allows selection of the Area for the selected Client. |
| | **Backup MCPU** | When using Ethernet, allows entry of a Mirror IP address of a Client. |
| | **Protocol Type** | Allows selection of either **RCL** (Router Control Language protocol) or **NP** (Native Protocol). |
| Exclusion Sets | **Lvl Exclusion Set** | Allows selection or editing of a Level Exclusion Set to block Level access. |
| | **Area Exclusion Set** | Allows selection or editing of an Area Exclusion Set to block Area access. |
| | **Dst Exclusion Set** | Allows selection or editing of a Destination Exclusion set to block control of specific Destinations. |
| Flags | **Chop Lock** | This feature is currently not available. |
| | **Salvo Lock** | When ON, prevents Salvo execution from the panel. |
| | **Monitor Control** | When ON, allows the panel to control system Monitor Crosspoints while operating in Destination Mode with each Destination Take. |
| | **Protect Override** | If ON, individual Take commands (NOT Salvos) issued by a client will go through even if the Destination is Protected/locked by some other device. This flag should be turned ON only if absolutely necessary. |
| | **Retain Protects** | When ON, the Protects issued by a client are retained even after the client disconnects. If the Destinations protected by this client need to be unprotected, either the client has to reconnect and issue unprotect commands or the user needs to unprotect the Destinations from the Router Controller OUI. When OFF, all the Protects issued by this client are unprotected as soon as the client disconnects. |
| | **Disable ACKs** | When ON, the server will not send level 4 acknowledgements to the clients. Refer to the separate Routing Products Protocol Manual for details on level 4 acks. |

**Multiple Conn**   Allows automation clients to have multiple simultaneous connections from the same IP address. By default this flag is disabled, limiting the client to one active connection at a time from an RCL or NP client.

When the flag is disabled and a connection is active, if another connection is attempted from the same IP address, the previous connection (that was active) gets dropped and the new connection will get connected.

**Debug Rx**   If ON, the server logs every command received by this client on the console. Leave OFF unless you are debugging.

**Debug Tx**   If ON, the server will logs every response sent to this client on the console. Leave OFF unless you are debugging.

**Ignore Case**   This feature is currently not available.

**Query Only**   If ON, Take, Protect, and Salvo commands from this client are not executed. Only query commands are executed.

**Frame Accurate**   When ON, by default the server will ensure that the Take happens exactly 6 frames after the time the command is received by the server. If this flag is OFF, the Take can happen earlier, but the exact time at which it happens may vary.

The delay can be changed by creating a text file named FDELAY (without a .txt suffix) that contains only the number of frames to delay Takes. Minimum value is 6 frames. Save this file to the SCB's flash memory, and then reboot the SCB. For redundant operation, the same file must be present on the flash of both SCBs.

The specified delay is guaranteed from the time the Encore receives the Take command (not from the time the client sends it). Hence, this does not include the time it takes for the Message to reach Encore from the Client. Though this time is usually negligible, it becomes significant for serial connection with a low baud rate.

**Dst Monitor**    This field becomes active only when the **Monitor Control** flag is ON. When **Dst Monitor** is active, clicking on it opens a menu listing all the Monitor Outputs defined for the system (only in the particular Area specified in the Area field for NP Clients). You can choose one monitor output for a panel. When this panel sends Take Monitor commands, it specifies only the Destination in the command. The specified Destination is then taken on to the selected Monitor Output.

**Refresh Rate**    If this value is non-zero, it indicates the number of seconds the client can remain silent. If the client does not send any command within this duration, the server will declare it an inactive client, drop all Protects done by it, and disconnect the client.

Serial communication parameters are displayed and available for editing when a Serial port has been selected.

| Serial Parameters | |
|---|---|
| Baud Rate | 9600 |
| Data Bits | 8 |
| Stop Bits | 1 |
| Parity | None |
| Handshake | None |

# Saving and Loading RCL Configurations

RCL client configuration data is saved to the SCB flash memory as well as to the Sharer, the same as other panel configuration data. You cannot modify RCL client configuration data if the Sharer is not on-line.

When a specific client configuration is modified, it is saved automatically when you exit from the RCL configuration screen. The **Modify** and **Save** buttons in the Panel Server screen will re-save the same configuration again, but this is redundant and so not required.The Panel Server **Load** button reloads the entire configuration (the RCL data along with the Panel Server data) from the Sharer.

## Tie-Lines and New Router Configurations

If the Router Controller contains a configuration without Tie Lines and a new Router Controller configuration is loaded that contains Tie Lines, the RCLNP GUI cannot retrieve the Tie Lines. Automation clients using the RCLNP GUI can retrieve the Tie Lines after they have been saved from the Tie Config screen.

When loading a new configuration with Tie Lines, saving the database (at least once) and rebooting the system will allow automation clients to retrieve the Tie Lines.

## Serial Port Configuration

The Encore SCB COM2 port (a generic port that can be used with RCL Clients) comes configured from the factory with the following defaults:

*Table 26. Default COM2 Port Settings*

| Parameter | Value |
| --- | --- |
| Baud rate | 9600 |
| Data Bits | 8 |
| Stop Bits | 1 |
| Parity | None |
| Handshake | None |

Other Encore SCB serial ports (for example, those available with the optional SIO card) also default to these values. Serial port settings can be edited if necessary, using the Serial Parameters fields described above.

## Interfacing with the RCL Server

The Sharer is required to be on-line only for the purpose of configuring the clients. Once the clients are configured, the client can connect to the RCL Server whether or not the Sharer is on-line.

When the Panel server starts up, it must find at least one Router on-line. Otherwise, it will not serve any clients.

The user should make sure that the client is configured before attempting to make the client talk to the server. If an Ethernet client attempts to connect and if it is NOT yet configured in the RCL Server screen, the connection will be terminated by the Server immediately. If a serial client connects to a port which is NOT yet configured in the RCL server screen, the client will not get any response from the Server.

## RCL Client Configuration

Use the instructions provided by the Client's manufacturer to configure the Client to communicate with the machine on which the Control Panel Server application is running.

# *Tie-Line Manager*

## Overview

### Tie-Line Functionality

Tie-lines can be used to link different matrices, allowing Sources in one matrix to be routed to Destinations in another matrix. Tie-lines that span matrices are called system tie-lines. A typical use of a system tie-line is to allow interconnection between different areas of a facility that have separate routing matrices.

Tie-lines can also operate within a single matrix, and these are called local tie-lines. Typically a local tie-line is used to route signals to and from an external processing device, like a standards converter.

A tie-line path that directly connects one matrix to another is called a single hop tie-line. Multiple hop tie-line paths can also be created that use multiple tie-lines to span more than one matrix (Figure 157).

*Figure 157. Tie-Lines*
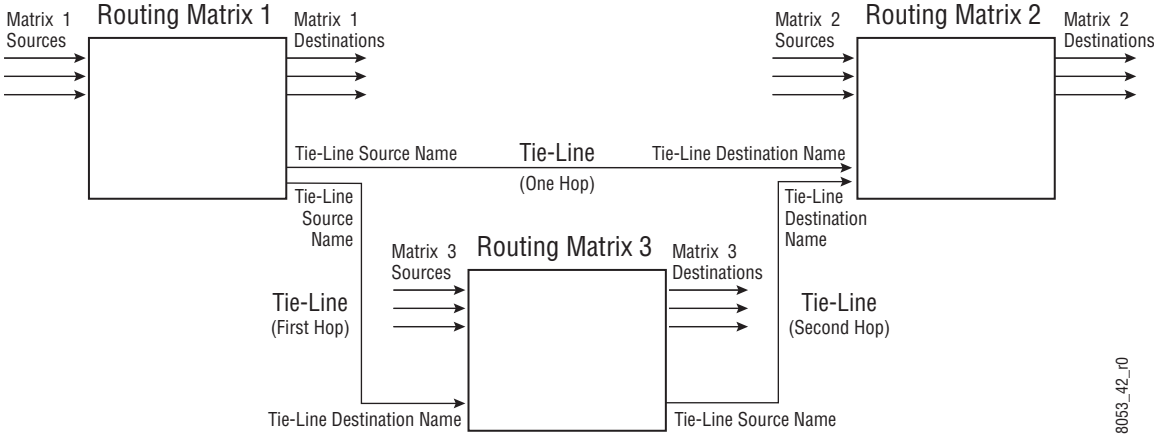


A tie-line has an input (Source) side that connects to a Destination of the sending matrix, and has an output (Destination) side that connects to a

Source of the receiving matrix. The same tie-line name is given to both the Source and Destination ends of the tie-line, and that shared name defines the two components of that tie-line.

## Tie-Line Terminology

**Floating Tie-Line** - The tie-line is usable by all, and is used and released as necessary. Tie-lines are released when all Destination users of the tie-line become routed to different Sources. All users of a Floating tie-line are considered equal. A Floating tie-line will not be released until all its users are gone. A Destination, having acquired a remote Source, will never lose that Source on a floating tie-line.

**Reserved Tie-Line** - The tie-line is allocated for use by the specified Destination. This tie-line will not be used unless the Destination requesting the tie-line matches the configured Destination. The system option "Share Reserved" allows a different user to use this tie-line if he requires the same Source as the reserved user. However, the reserved user has full rights to move the tie-line Source unconditionally.

**Fixed Tie-Line** - The Source of the tie-line is permanently fixed to that specified Destination. If a Destination requires a particular Source, fixed tie-lines are preferable to floating ones, as they are guaranteed to remain routed to that Source.

**Ultimate Source** - The original router Source in the first sending matrix is called the ultimate Source for that tie-line.

**Local Source** - The Source in that local router for a tie-line. On multiple-hop tie-lines the local Source will be different from the ultimate Source.

**Ultimate Destination** - The final Destination in the last receiving matrix is called the ultimate Destination for that tie-line.

**User** - A user of a tie-line is a Destination that currently has a Source routed to it through that tie-line. A tie-line may have multiple users.

## The Tie-Line Manager Application

The Tie-Line Manager application makes tie-line functionality transparent to the operator, automatically assigning and freeing tie-lines as needed. Because Tie-Line Manager spans an entire facility, crossing Area boundaries, only one instance of Tie-Line Manager can run at a time. The only exception to this when a Mirrored Tie-Line Manager is used as backup.

Besides handling tie-line operations, the Tie-Line Manager application is also used to configure tie-lines, defining how they will operate in your system. The connections used for tie-lines by each matrix are defined with

the Router Control application when Sources and Destination are created for that matrix.

# How Tie-Line Manager Works

The Tie-Line Manager application does not control routing matrices directly. For system tie-lines, Tie-Line Manager works in conjunction with the Router Controllers of the matrices involved the tie-line path. When a Router Controller receives a panel or other request to connect a Destination in its matrix to a Source outside its matrix (which is inaccessible directly), it sends a request to Tie-Line Manager. Tie-Line Manager then checks globally for that Source, finds an available tie-line, and then issues appropriate commands over the network to the required Router Controllers to create that route. Because wider searches are involved, multiple tie-line hops can greatly increase the processing requirements for finding tie-line paths. You should configure the minimum number of hops possible to meet your tie-line path requirements. We also recommend running Tie-Line Manager on a dedicated processor, especially if multiple-hops are allowed.

TLM messages are time stamped when logged to the console, which can assist with troubleshooting.

## Tie-Line Properties and Restrictions

- Tie-line Sources are router Destinations, and tie-line Destinations are router Sources.

- Each hop can use only a single tie-line. It is not possible to use multiple tie-lines providing different Levels within a hop.

- A tie-line has Levels as configured for the Router Controller Source and Destination. All Levels of a tie-line must be used. It is not possible to use part of a multi-Level tie-line. The tie-line Destination (Router Source) must match all required Levels of the requested Router Destination. The tie-line Source (Router Destination) must be on all its Levels by the requested Router Source. The actual Router Source may have more Levels than the tie-line requires, however.

- Local tie-lines can link the matrices of one Router Controller, but are still managed by the Tie-Line Manager.

- Overall operation of tie-lines can be configured to have:

  **Share Reserved** - Allows another user to use a reserved tie-line if it calls for the same Source as the reserved user.

  **Park Ties on Release** - Each physical matrix may have a Source configured as its park input, which can be selected automatically when a tie-line is released.

**Auto Ownership** - When the Tie-Line Manager learns over the network that a route has happened which uses a tie-line, it adds that Destination as a user of that tie-line.

## Mismatched Tie-Line Workarounds

For every tie-line Destination Level involved there must be a corresponding Source Level. If this is not the case, the Take will fail and none of the Levels will switch. A Tie-Line cannot switch an unspecified Level.

One work around is to manually disable any mismatched Destination Levels before issuing a Take involving tie-lines. Another more comprehensive work around is to add all Levels to all Source definitions even if there is no actual input on the additional Levels. These missing inputs should be connected to the Black connector for video, a Silence connector for audio, etc. This approach fixes the undesired Tie-Line Manager behavior and, more importantly, in the case where a switch is made from a three-Level Source to a two-Level Source (on a three-Level Destination), it eliminates the breakaway asterisk from being displayed on the Destination after the Take.

## Tie-Line Manager System Performance

If your Encore system has less than 100 tie-lines and allows only one hop, you can run the Tie-Line Manager on a System Controller with other applications. However, if your system has more than 100 tie-lies, or allows more than one hop, we recommend running Tie-Line Manager alone on a dedicated System Controller. Processing requirements (finding tie-line paths) increase dramatically as the number of tie-lines and/or number of hops increases.

## Tie-Line Manager Logging

Tie-Line Manager messages are now time-stamped when they are logged to the console. This feature can help with system configuration, service, and troubleshooting.

# Tie-Line Manager Screen Descriptions

## Main Menu Screen

*Figure 158. Tie-Line Manager Main Screen*
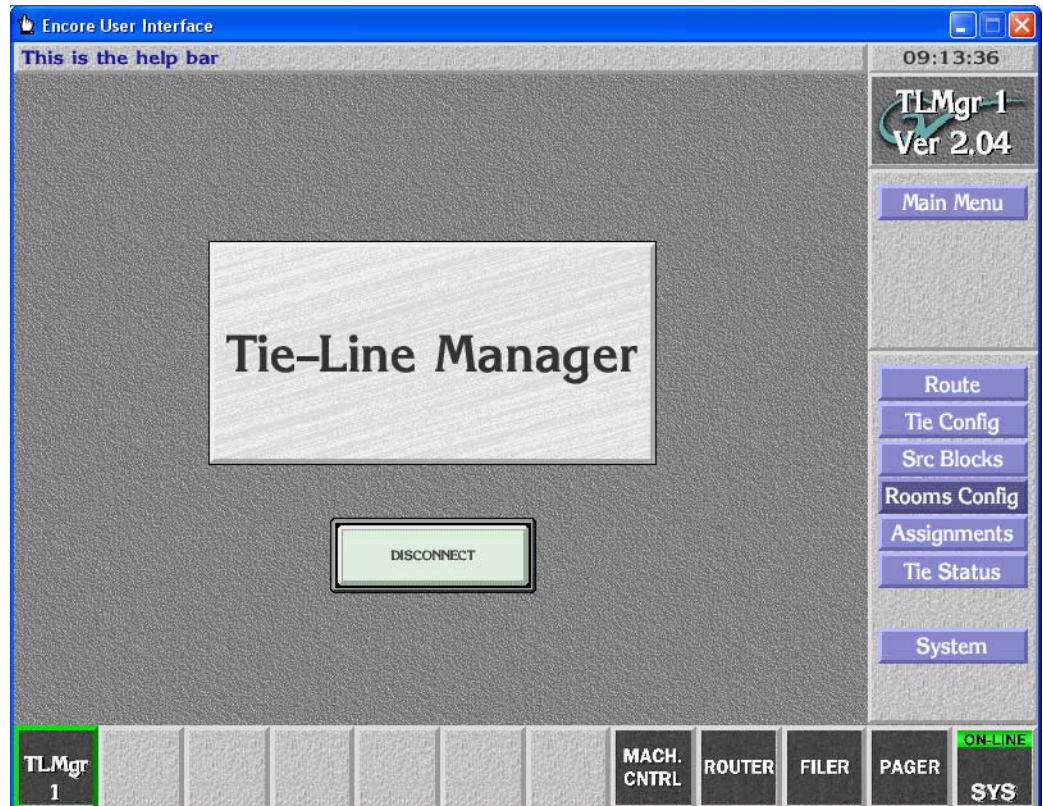


Tie-Line Manager is a remote application, and is accessed by logging into the Encore OUI, clicking on a blank button on the bottom row, and selecting the Tie-Line Manager application, which may be named differently on your individual Encore system. Buttons on the right of the Main Menu screen provide access to the other Tie-Line Manager screens.

# System Screen

*Figure 159.  Tie-Line Manager System Screen*



| | **Filing Mode** | Displays the Source of the active database — Sharer or Local. In **Sharer** mode the database has been loaded from the Sharer PC (normal operating mode). In **Local** mode the database has been loaded from the local hard drive. |
|---|---|---|
| System | **File Path** | Displays the configuration file path for the shared database. |
| | **Area** | Reports the Area where Tie-Line Manager has been set up and is running. |
| | **Sources** | Displays the total number of Sources accessible by the Tie-Line Manager. |
| | **Destinations** | Displays the total number of Destinations accessible by the Tie-Line Manager. |
| | **List Areas** | Opens a window listing all the areas in the system along with the sizes of their matrices. |
| | **List Sources** | Displays a window list of all Sources in the system. |
| | **List Dests.** | Displays a window listing of all Destination in the system. |

**Build Number**     Reports the build number of the application.

**Operating Mode**

**Mode of this TLM**     Displays the mirroring mode. Click the button for a list of mirroring options: **Master, Mirror,** or **Mirrored Master**.

**IP of other TLM**     The IP address of the device which will mirror this TLM is displayed and entered with this field.

**Set Timeouts**     Displays a window for setting timeouts.

| MirrMast and Mirror Timeouts (millisecs) | |
| --- | --- |
| MirrMast Receiving "OK Ack" from Mirror | 500 |
| Mirror receiving "Received Ack" from MirrMast | * |
| Mirror Receiving "Processed Ack" from MirrMast | * |
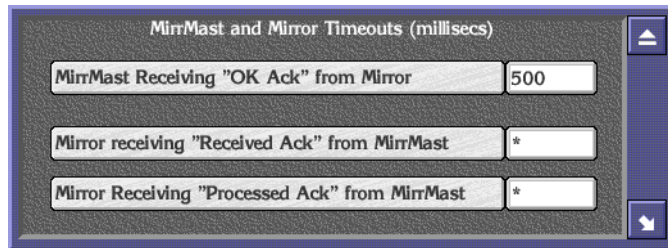
**Config**

**Share Reserved**     When on, allows another user to use a reserved tie-line if it calls for the same Source as the reserved user.

**Park Ties on Release**     Each physical matrix may have a Source configured as its park input. When on, this Source will be selected automatically when a tie-line is released.

**Auto Ownership**     When on, if the Tie-Line Manager learns over the network that a route has happened which uses a tie-line, it will add that Destination as a user of that tie-line.

**Overrides**

**Release Users**     Select this option to and free all tie-lines. A precautionary prompt is displayed that must be accepted before the tie-lines will be released.

CAUTION - If "Park on Release" is active all tie-lines will revert to their park Sources when released. If "Park on Release" is off, the paths will not change, but any user will be able to use a tie-line and change its Source.

**Disable TLM**     Click to completely remove Tie-Line Manager from the network. Existing tie-line routes will not be affected, but they will not be able to be changed.

**Event Logging**  Opens a window allowing selection of logging options.

### Event Logging Options

- Show Log on Screen
- Intermediate Mode
- Verbose Mode
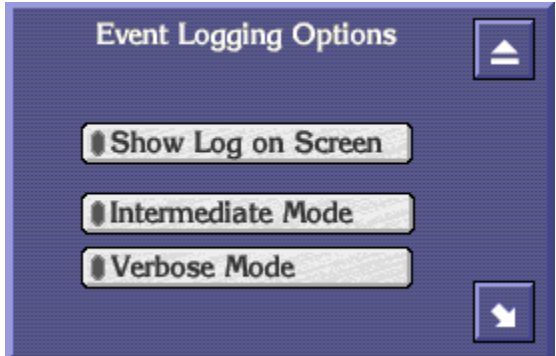
CAUTION - To prevent slowing system performance, keep logging disabled unless you are troubleshooting.

**Save**  After the settings are configured, click **Save** on the Menu Bar to save the tie-line settings to the system.
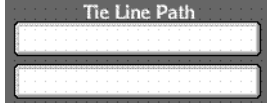
# Route Screen

*Figure 160.  Tie-Line Manager Route Screen*
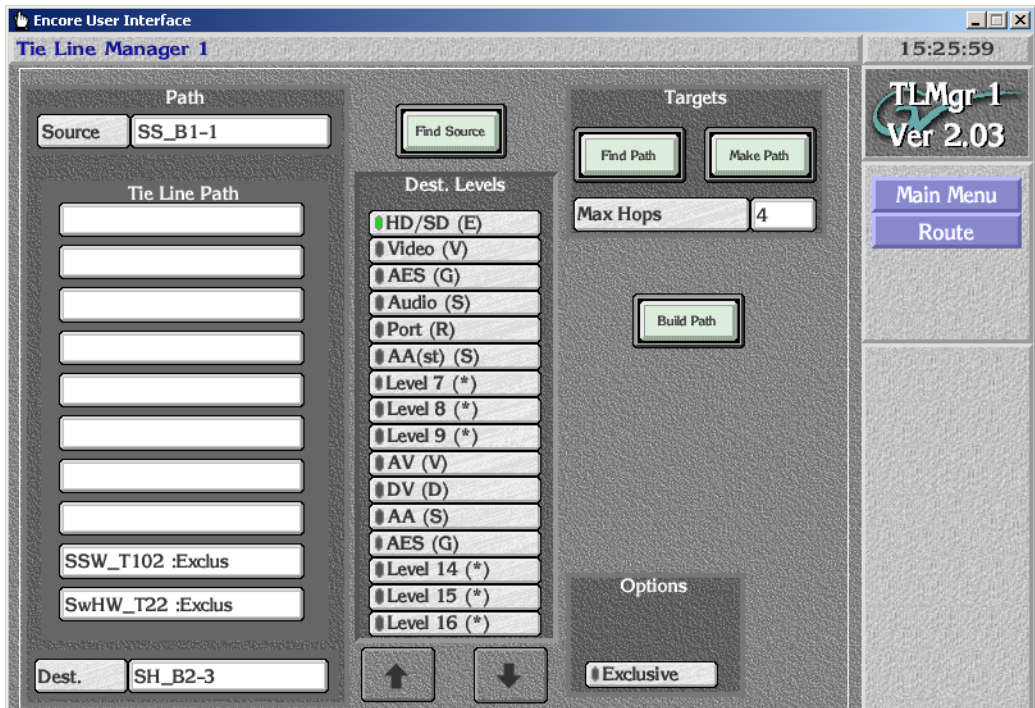
The Route Screen is used to set the number of tie-line hops the system will use, and can also be used to manually create tie-line routes. Because Tie-Line Manager, once configured, creates and releases tie-lines automatically as needed, this screen is not routinely used. However, it can be helpful if

you want to test tie-lines to ensure your system topology permits the creation of the routes you will need.

| | | |
|---|---|---|
| **Path** | **Source** | Opens a window from which you can select the ultimate Source of a tie-line. |

**Tie Line Path**

Displays the tie-lines involved in a found path.

When the **Build Path** button is green, you can manually select tie-lines for a path. Click on the bottom empty box to open a window allowing selection of existing tie-line usable by that Destination.

Click on a displayed tie-line to see more information about that tie-line.

| | |
|---|---|
| **Dest.** | Opens a window from which you can select the ultimate Destination of a tie-line. |
| **Find Source** | When a Destination is selected, clicking on **Find Source** will display the current Source for that Destination in Source button above. |
| **Dest. Levels** | Displays the Levels involved in the selected path. |

**Targets** **Find Path** When pressed, searches for a path between the selected Source and Destination. If found, the tie-lines involved are displayed on the left.

**Make Path** When a valid path has been found, clicking on **Make Path** will switch the Source to the Destination using the indicated tie-line(s)

**Max Hops** Sets the maximum number of hops the system will search to find a path.

CAUTION - To prevent slowing system performance, select the smallest number of hops to meet your needs.

**Build Path** When on (colored green) the tie-line path is built manually.

**Options** **Exclusive** This feature is currently not available.

# Tie Config Screen

*Figure 161. Tie-Line Manager Tie Config Screen*
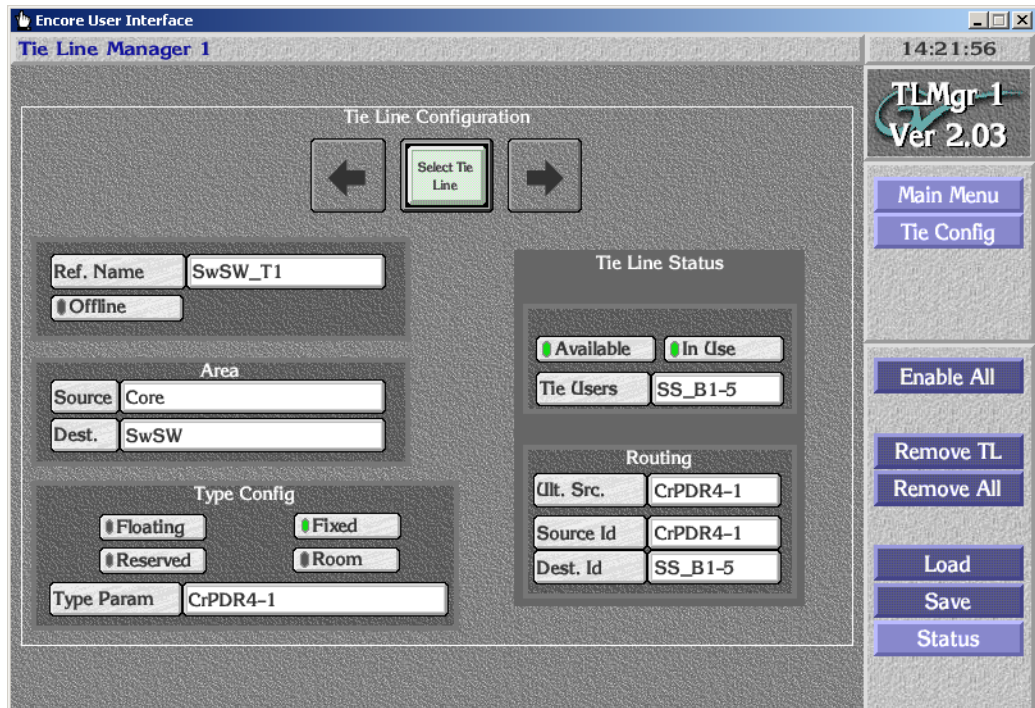


This Tie Config screen is used to configure individual tie-lines, and to load and save tie-line configuration files.

**Select Tie Line**  Opens a window allowing you to select a tie-line for configuration.

You can also use the left and right arrows to scroll through the available tie-lines.

**Ref. Name**  Displays the name of the selected tie-line.

**OffLine**  When on, the tie-line is taken off line. Typically this is only used when building a new system to keep operators from trying to use routes using hardware not yet installed.

If an existing tie-line is taken off line, the Source and Destination will not change, but the tie-line will not be usable by any others, and will not be able to be released.



Displays the respective Areas of the Source and the Destination of the selected tie-line.

| | | |
|---|---|---|
| **Type Config** | **Floating** | When on, the tie-line will be used whenever it is needed by the system. |
| | **Reserved** | When on, the tie-line will be reserved for use by only one Destination. Clicking on **Type Param** opens a window to select the Destination. |
| | **Fixed** | When on, the tie-line will be always be use a specific Source and Destination. |
| | **Room** | When highlighted, the tie-line is associated with a Room. |
| | **Type Param** | Displays the qualifier for the selected mode (for example, the Reserved Destination). |
| **Tie Line Status** | **Available** | When highlighted, the tie-line is available for use. |
| | **In Use** | When highlighted the tie-line is being used, and the first user is listed in the Tie Users box below. |
| | **Tie Users** | Displays the first user of the tie-line. Clicking on the box opens a window that lists all the users of that tie-line, and the date and time they each began using the tie-line. |
| **Routing** | **Ult. Src.** | Displays the name of the ultimate Source of the tie-line, if in use. |
| | **Source Id** | Displays the name of the local Source for the tie-line. |
| | **Dest. Id** | Displays the first user of the tie-line, if the tie-line is in use. Clicking on this button displays a list of all users. |
| **(Menu Bar)** | **Enable All** | Places all off-line tie-lines back on-line. |
| | **Remove TL** | Removes the selected tie-line if it is invalid. To remove a valid tie-line, you must first use the Router Controllers involved to make it invalid (remove the Tie-Line type from the Source and Destination settings. |
| | **Remove All** | Removes all invalid tie-lines. |
| | **Load** | Loads the last saved tie-line configuration file. Any changes made since the last save will be lost. |
| | **Save** | Saves the current tie-line configuration, overwriting the last saved file. |
| | **Status** | Accesses the Tie-Line Status screen. |

## Src Blocks Screen

*Figure 162. Tie-Line Manager Source Blocks Screen*
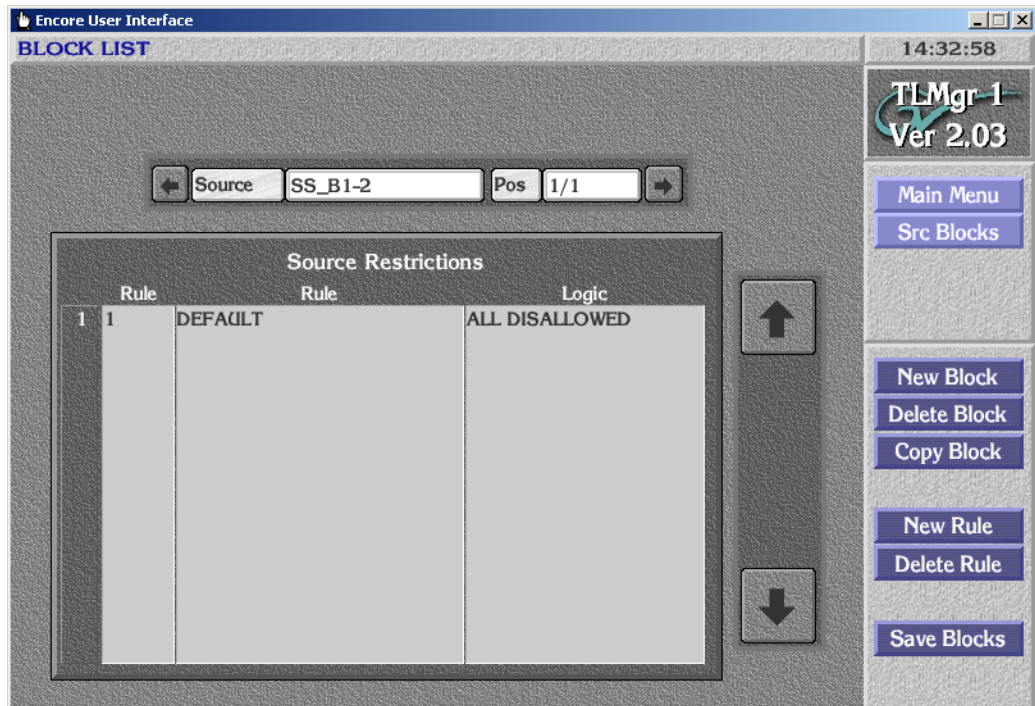


The Source Blocks screen lets you block Sources from being accessed by Destinations via tie-lines. This is accomplished by specifying a Source, creating a Block for that Source, and then creating Rules for that Block.

Source Blocks are active on the next route request, and existing Destinations that are already routed to a now blocked Source will not be routed away.

**Note**    Source Blocks only apply to Network route requests and NOT to tie-line routes made directly in the TLM Route Screen. Do not try to use the Route Screen to test Source Blocks.

### Source Restrictions Window
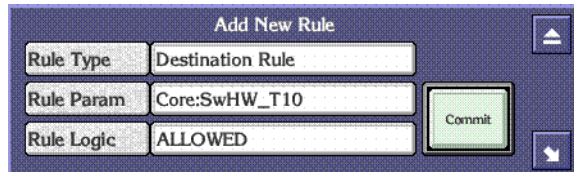
The left and right arrows at the top are used to scroll through the Sources that currently have Block restrictions. Clicking on the name of the Source opens a window allowing you to select a different Source for that Block. The listed order of the currently selected Source Blocks is shown on the right. The Window below displays the Rules in established for that Source. The arrows on the right can scroll a long list of Rules.

**(Menu Bar)**    **New Block**    Opens a window allowing selection of a Source to be blocked.

**Delete Block**   Deletes the current blocked Source.

**Copy Block**   Copies the existing set of Rules for a Source. These can be entered into a new Block by pressing the same button.

**New Rule**   Opens a window allowing the creation of a new rule. You can specify Areas, individual Destinations, or Rooms.



**Delete Rule**   Deletes the selected Rule from the Block.

**Save Blocks**   Saves the Source Block information to the system database on the SCB flash memory and to the Sharer PC.

# Rooms Screen

*Figure 163.  Tie-Line Manager Rooms Screen*
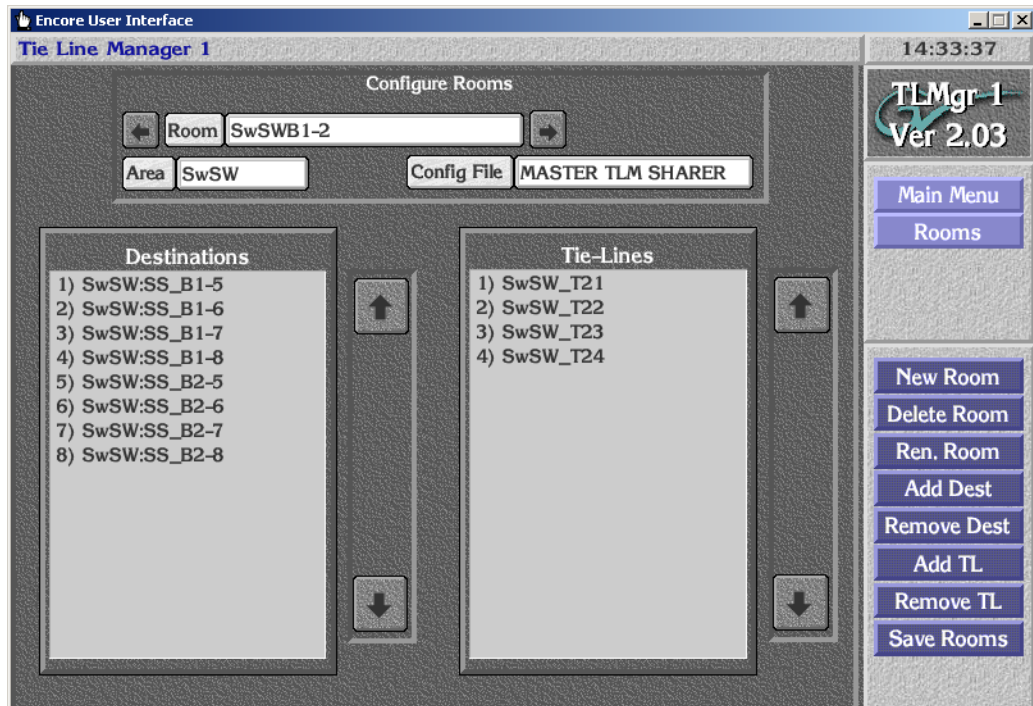


The Rooms feature in Tie-Line Manager gives you another way to organize how tie-lines are used. The Tie-Line Manager can be used to create groups of Destinations (Rooms), and tie-lines can be assigned to a Room. Tie-lines belonging to a given Room are reserved for use by the Destinations in that Room. Destinations not in the Room will not have access to these tie-lines. Destinations in a Room must be from the same Area.

Destinations can be added to or deleted from a Room, and tie-lines can be added to or deleted from a Room, which allows you to manage the tie-lines usage in groups as well as individually.

**Room**  Displays the name of the current Room configuration. Clicking on the name opens a window listing the available Rooms for selection. The left right arrows allow scrolling through the existing Rooms.

**Area**  Displays the Area of the Destinations in the Room.

**Config File**  Displays the name of the file with the Rooms configuration data.

**Destinations**  Lists the Destinations in the currently selected Room.

|  | **Tie-Lines** | Lists the tie-lines in the currently selected Room. |
|---|---|---|
| **(Menu Bar)** | **New Room** | Opens a keypad to enter the name for a new Room you will create. |
|  | **Delete Room** | Deletes the currently selected Room. |
|  | **Ren. Room** | Opens a keypad allowing the re-naming of a Room. |
|  | **Add Dest** | Opens a list from which you can pick Destinations for the Room. In a new Room all Destinations will be available. After the first Destination is selected, subsequent Destinations listed will only be in that same Area. |
|  | **Add TL** | Opens a list from which you can select tie-lines to assign to that Room. |
|  | **Remove TL** | Removes the selected tie-line(s) from being included in the Room. |
|  | **Save Rooms** | Saves the current Rooms settings to the database on the SCB flash memory and to the Sharer PC. |

## Tie Status Screen

*Figure 164. Tie-Line Manager Status Scree*
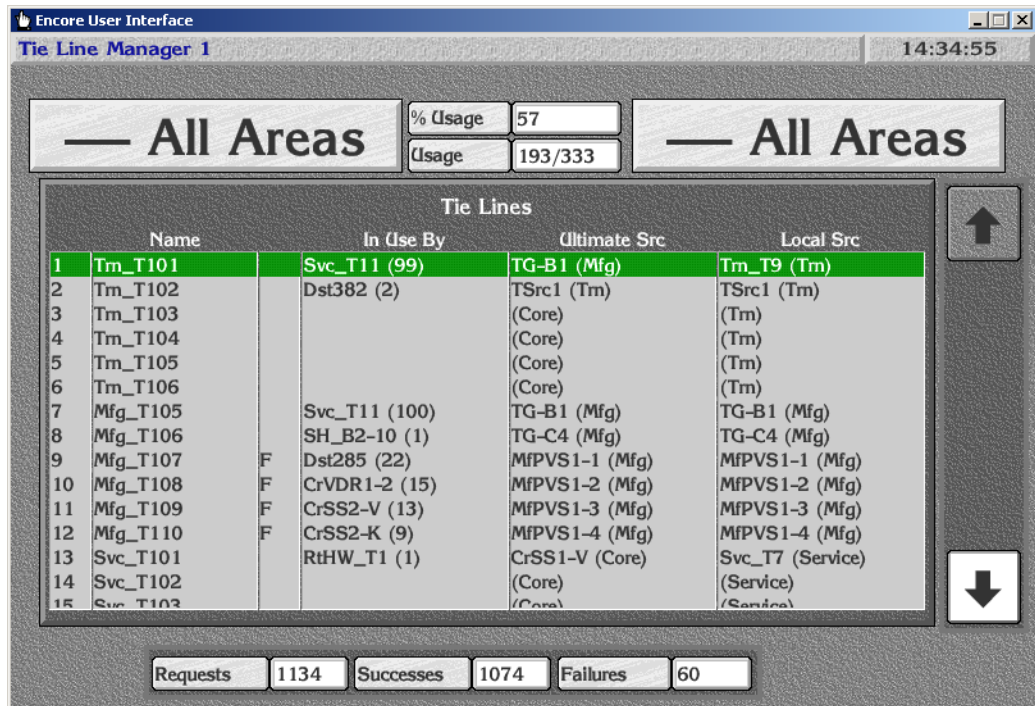


The Tie Status screen displays the current state of tie-lines between Areas, and permits the releasing of individual tie-lines so they can be used by different users.

### Tie-Lines Status Window

The large scrolling list in the center of the screen displays the tie-lines that span the Areas selected by the buttons above. You can scroll through the list using the up and down arrows on the right.

The names of the tie-lines are listed on the left. Letters in the third column show that a tie-line is Fixed (**F**), Reserved (**R**), or assigned to a Room (**RM**).

Clicking on the **Name**, **Ultimate Source**, or **Local Source** columns opens the Tie-Line Status pane displaying information about that tie-line (Figure 165).

*Figure 165. Tie-Line Status Pane*



This same information is displayed on the Tie Config screen (Figure 161 on page 272), and this pane operate the same. For example, clicking on the **Tie Users** button displays a list of all the users of that tie-line.

The **In Use By** column shows the top user along with the number of users of that tie-line. An unavailable or offline Router Matrix is also indicated in this column. Clicking the **In Use By** column of a tie-line in use allows you to release that tie-line. A warning message appears that you must confirm before the tie-line will be released (Figure 166).

*Figure 166. Release Tie-Line Warning Message .*
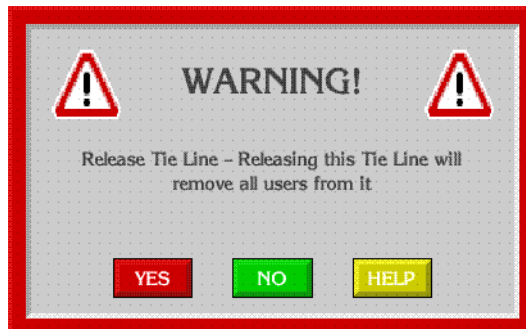


| | | |
|---|---|---|
| **(Top of Screen)** | **Area Buttons** | Displays the names of the current Areas selected. Clicking on a button opens a list of the Areas for selection. The left button selects a Source Area, and the right button selects a Destination Area. Only tie-lines spanning those areas will be displayed below. |
| | **% Usage** | Displays the percentage of tie-lines currently in use between the selected Areas. |

| | Usage | Displays the number of tie-lines and how many are currently being used between the selected Areas. |
|---|---|---|
| | Requests | Displays the number of requests for tie-lines in this day between the selected areas. Each day commences at midnight. |
| | Successes | Displays the number of requests successfully accommodated today. |
| | Failures | Clicking on this button displays a list of the last 100 failed route requests for tie-lines and the day/date of failure between the selected areas. The last failed route appears at the top of the list. A tie-line path can fail for various reasons, for example, tie-lines may all be in use. |
| (Menu Bar) | Refresh | Refreshes the list, updating it with any recent tie-line status changes. |

# Configuring Tie-Lines

## Tie-Line Manager Application Access

The Tie-Line Manager application needs to be accessible, which is accomplished with System Manager and by enabling the application in the web page of the System Controller running Tie-Line Manager.

## Create Tie-Lines in the Router Controllers

While Tie-Line Manager is used to configure tie-lines, the Router Control Applications are used to create them, because system tie-lines are paired Sources and Destinations between different matrices.

You will need to decide which matrix connectors will be used for your tie-lines, and what names you will use to identify each tie-line. A descriptive name that includes the matrices or Areas each tie-line spans can help you keep things straight during configuration.

The tie-line Source configuration is set by configuring a Destination on the Router Controller of the Source Area to be a tie-line. Similarly, the tie-line Destination configuration is set by configuring a Source on the Router Controller of the Destination Area to be a tie-line, with the same name (see Figure 167 and Figure 168).

*Figure 167. Router Controller Source Screen, for Tie-Line Destinations*
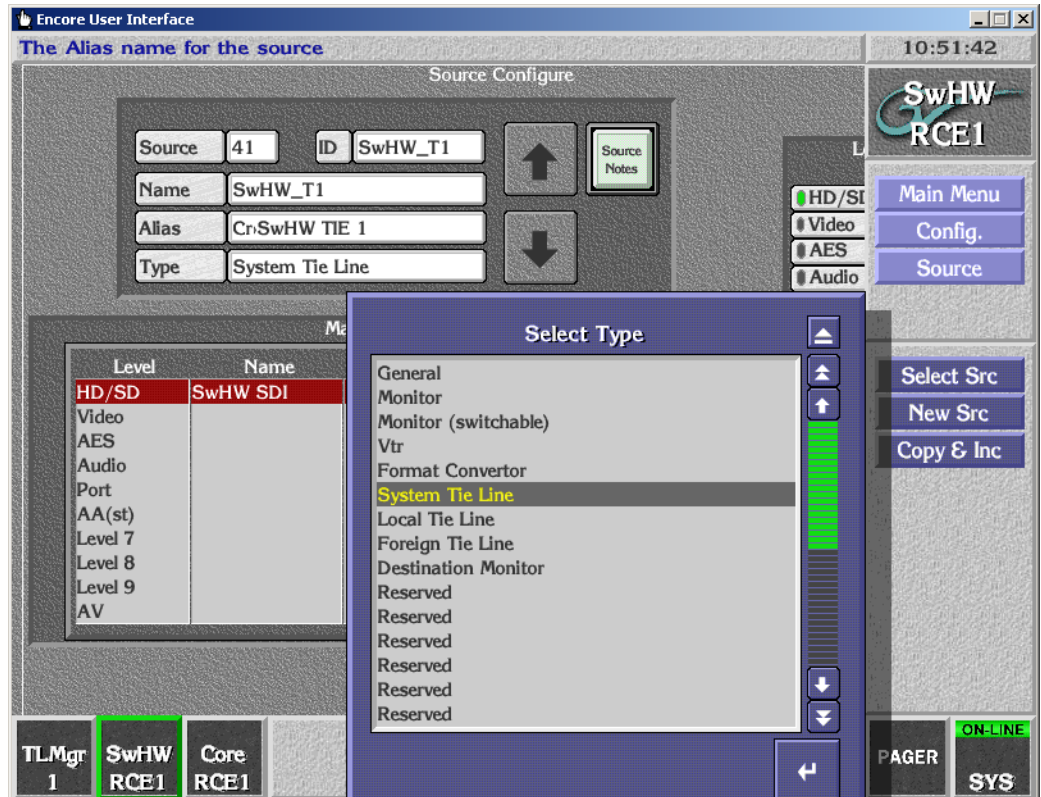


*Figure 168. Router Controller Destination Screen, for Tie-Line Sources*
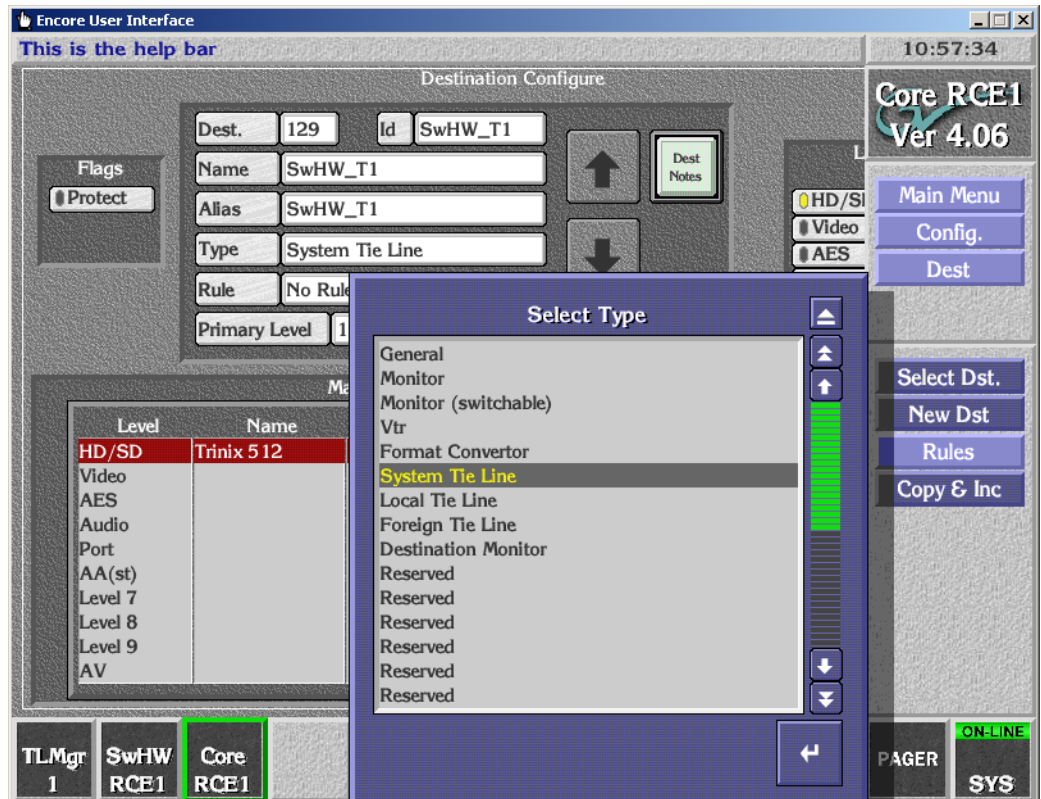
After **Commit Changes** are performed on all the Router Controllers, the Tie-Line Manager receives the network broadcast information and automatically adds the tie-line to its database in memory.

# Configuring a New Tie-Line With Tie-Line Manager

New tie-lines received over the network are initially flagged as Offline. They need to be put on-line before they can be used. Also they must be saved in the Tie-Line Manager's database so that they are read at the next SCB start up.

1.  Launch Tie-Line Manager and go to the Tie Config screen.

2.  Select the new tie-line by it name with the button or arrows at the top of the screen.

3.  Click the **Offline** button to put the tie-line on-line. The button's green indicator should be off.

4.  The default tie-line setting is **Floating**. If you want a different setting, choose it in the Type Config area, entering Type Parameters if needed.

*Figure 169.  Tie Config Screen, New Tie-Line*
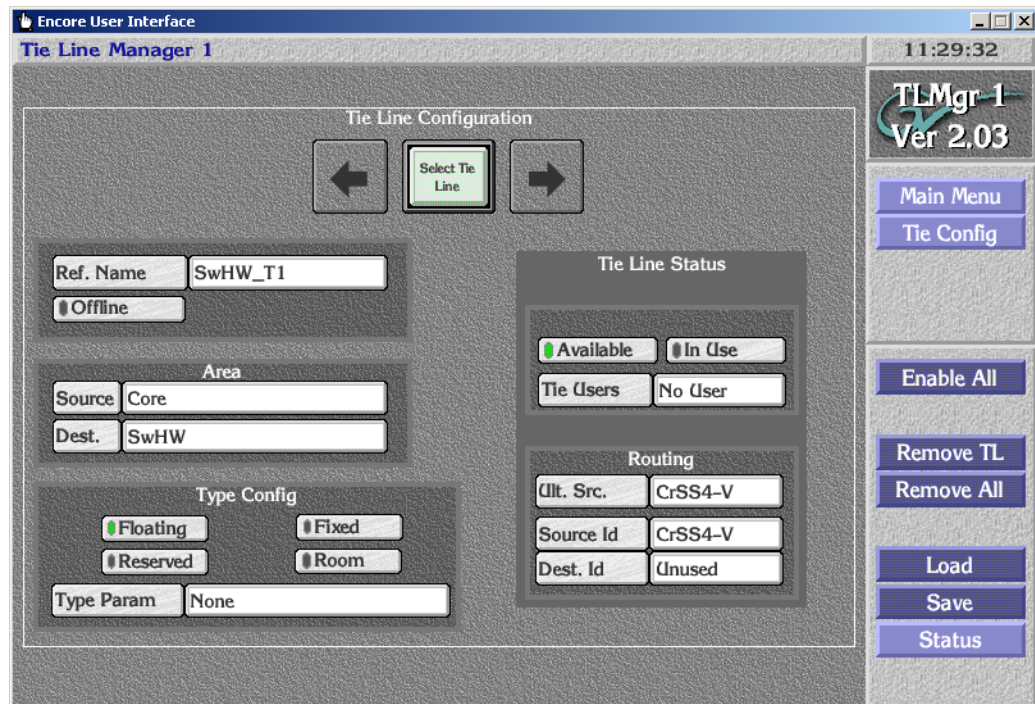


5.  Click **Save** to save the tie-line configuration.

The tie-line should now be able to be used by system operators.

# Tie-Line Manager Assignments

Tie-Line and Machine Control Assignments can be created between Rooms. Assignments reserve a Source to Destination routing path without doing an actual Take. Assignment is a customized feature that does not apply to most existing or new Encore facilities. Assignment is activated with the **Enable Assignments** button on the Tie-Line Manager System screen (Figure 170).

*Figure 170.  TLM System Screen, with Assignments Enabled*
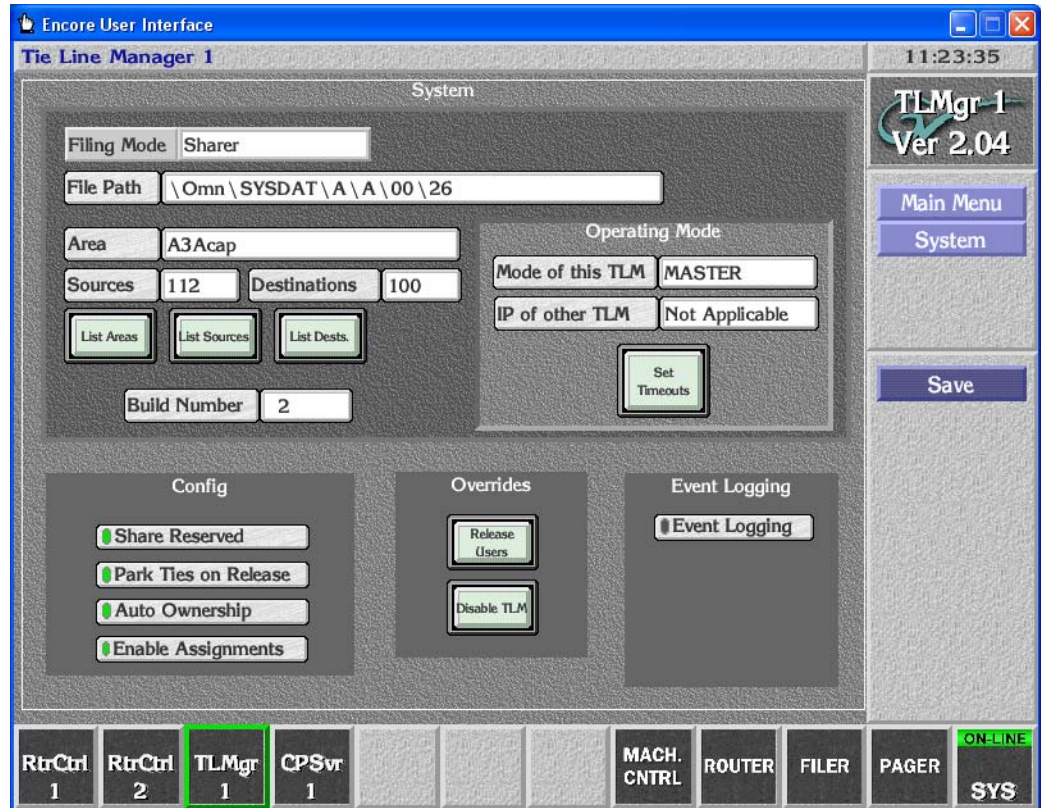


If the Assignments feature is disabled a message is displayed.

*Figure 171.  TLM.*
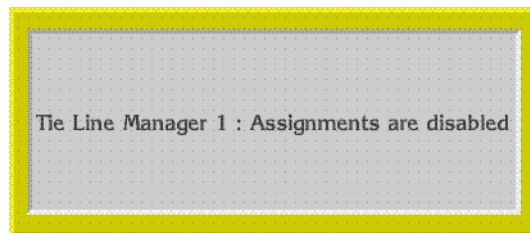
Once enabled, the Tie-Line Manager Config screen changes for custom operation (Figure 172).

*Figure 172. Tie-Line Manager Custom Rooms Config Screen*
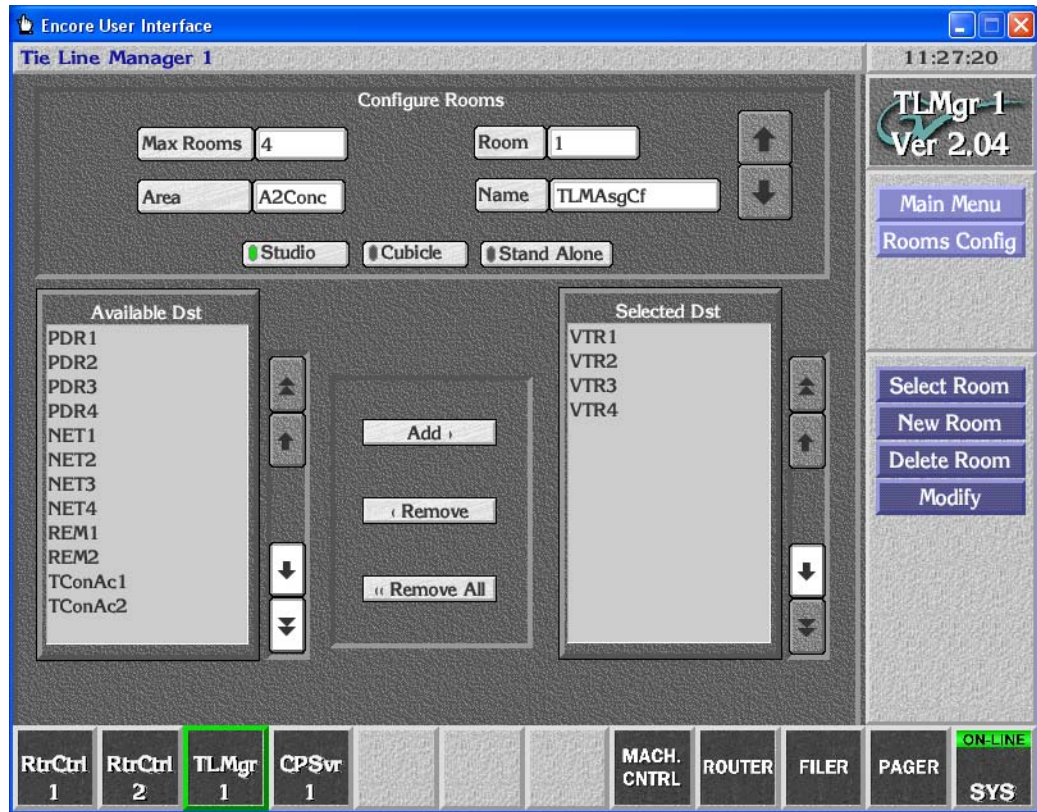


See Figure 163 on page 276 for comparison to the standard Rooms screen.

Assignments are created and released using the Visual Status Display (VSD) application. See the separate *Visual Status Display Instruction Manual* for more information.

# *Additional OUI Operations*

## Overview

Encore systems offer additional OUI applications related to facility operations:

- Local Router Panel (LRP)

- Local Machine Control Panel (LMCP)

- Filer Fax

- Pager

These applications are available on all Encore OUI stations, and can be useful tools for facility engineers when they configure, maintain, and troubleshoot Encore systems.

Some or all of these applications may also be useful for system operators.

# Local Router Panel (LRP)

## Local Router Panel Overview

The Local Router Panel (LRP) acts like an Encore control panel, and can be used to route Sources to Destinations using your workstation. Sources and Destinations can be configured by a System Administrator to suit the needs and roles of specific users.

## Local Router Panel Screen Description

*Figure 173.  Typical Local Router Panel - Main Screen*
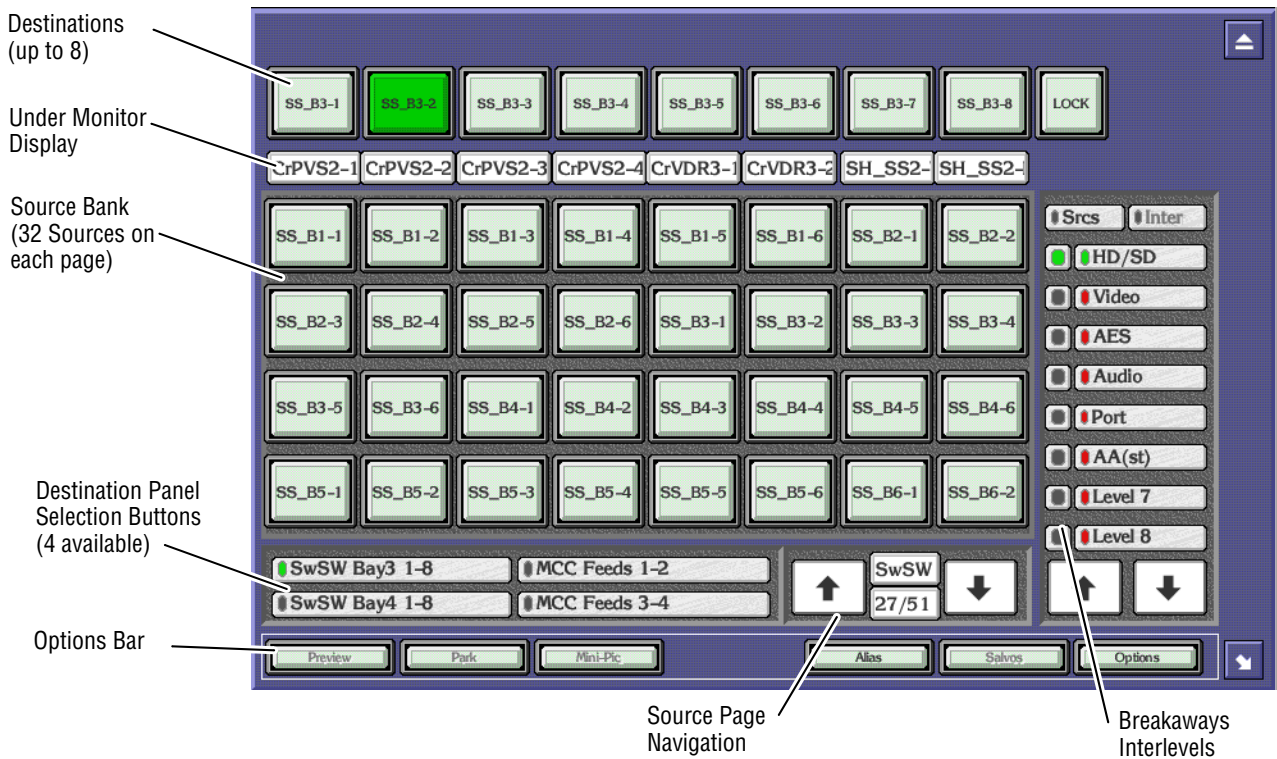


The Local Router Panel mimics a traditional Multi-Destination hardware panel.

• The basic LRP allows one of four 8-Destination screen panels to be displayed at any one time, with valid Sources for the specific Destinations being displayed as pages of 32 Source buttons.

• By entering Options/Config mode, the LRP can be re-configured for additional capabilities, including Preview, Park, Mini-Pic Sources, Alias edit, Salvos, and Interlevel routing.

### Destinations

Once the LRP has been set up, the Destination panel displays the names of up to eight Destinations on a row of buttons. The currently selected Destination is colored green.

- If the Destination is routed to a local Source, the Source bank that contains that Source is displayed below with dark legends, and the current Source is colored green.

- If the Destination is routed with a tie-line, the Source bank display below will initially show grayed out legends and the current ultimate Source will be colored green. Clicking on the Destination button changes the Source bank to show the intermediate tie-lines, and the tie-line employed will be colored yellow. If multiple tie-lines are used, clicking repeatedly on the Destination button cycles through all the tie-lines involved.

### Sources

The Source bank is a block of thirty-two indicator buttons that display Sources or tie-lines. The item currently routed to the selected Destination is highlighted green or yellow, depending on the page displayed and whether a tie-line is being used.

## Destination/Source Identification

You can move the mouse pointer over a Source or Destination button to view the full name on the help bar at the top of the screen. Any blank Source buttons are not applicable to the currently selected Destination.

## Destination/Source Navigation Controls

An OUI workstation can be configured to show up to four Destination panels. These can be selected using the **Destination Panel Selection** buttons, the button indicator showing green to highlight your choice.

Different Source banks can be displayed by using the **Source Page Navigation Controls**, the number of banks depending on the overall system configuration. These controls are used primarily to find Sources.

### Under Monitor Display

Below each **Destination** button there is an Under Monitor Display (UMD), which shows the Source currently connected to that particular Destination. When a Destination is selected, the Source Bank containing that Source is displayed. Clicking on the UMD opens a window allowing selection of a Source from the available Areas.

# Using the Basic Local Router Panel

## Opening the Local Router Panel

Click the **Local Router Panel** icon on the OUI Task Bar to open the LRP.

## Selecting a Destination and Source

If the Destination and Source are displayed on the screen:

**1.** Click the appropriate **Destination** button; the button will be highlighted green.

**2.** Click the desired **Source** button,

- Or -

Click the **UMD** and select a Source from the list window displayed. If your system has multiple Areas, selecting an Area in the window displays the Sources in that Area.

**Note**    Certain Destinations may be configured as being 'protected' by the System Administrator. A warning message window is displayed if you attempt to route a Source to a protected Destination, and you are required to either confirm or abort the route.

## Finding Destinations and Sources

If the Destination and Source are not currently displayed on the LRP screen, you can search for them:

### Destinations

• Click on a different **Destination Panel Selection Button** to bring up sets of pre-programmed Destinations.

**Note**    If the desired Destination is not pre-programmed, the global routing feature can be used to access all system Destinations (see page 291).

### Sources

• Click the **Up** and **Down Arrow** buttons on the Source page selector to scroll through the **Source Banks**.

• Click the upper **Router Area** button and select specific Area from the list. The first page of Sources for that Area will be displayed

• Click the lower numbered **Bank Display** window to directly select the Source bank you require by name.

## Breakaways (and Interlevels) Pane
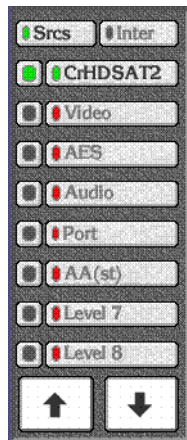
The Breakaways panel allows you to do the following:

- Monitor which route paths are connected to the currently selected Destination and from which Source.

- Establish Breakaways, i.e., select the Levels and route them through the channels required.

The **Show Sources** indicator button allows you to identify the Source of each of the Levels connected to the selected Destination. When the button is toggled on (indicator shows green), the names of the Sources currently connected to the selected Destination are shown on the **Next State** indicator buttons on the right; the Levels which are not connected are greyed out.

When the **Show Sources** button is toggled off (indicator shows black), the **Next State** indicator buttons on the right show the names of the Levels.

The **Current State** indicators on the left show the status of the Levels of the currently selected Destination. These indicators are highlighted in different colors as follows:

**Green** — The Level is connected between the Source and the selected Destination.

**Red** — The Level is broken away, i.e., the Level is being provided by a Source other than that shown on the UMD below the selected Destination.

**Black** — The selected Destination does not provide for the input of this Level type.

**Yellow** — An interlevel routing has been established.

The **Next State** indicator buttons display the names of the Levels. They can be toggled (by clicking them) and are highlighted in different colors with the following significance:

**Green** — Connect this Level to the selected Destination when the next Source is selected; the current Destination supports it.

**Red** — Connect this Level to the selected Destination when the next Source is selected; the current Destination does not support it.

**Black** — Do not connect this Level to the selected Destination when the next Source is selected.

Clicking the **Up** and **Down Arrow** buttons allows you to scroll through up to sixteen Levels. If the arrow button is grey, then you can scroll no further in that direction.

**Note** Interlevel routing is available via Options/Config mode. The **Next State** indicator buttons in the Breakaways Area reflect the status of the **Destination Interlevel** buttons.

### Remote Control of the LRP

Another application running on the same OUI workstation may remotely open an LRP display. When it does, the LRP behaves normally but with a different set of router Destinations. To return to the standard LRP set-up, click the LRP icon on the Task Bar.

### Exiting the Local Router Panel

You may exit the Local Router Panel at any time by clicking the Eject icon in the top right corner of the screen.

### LRP Options

Clicking the **Options** button displays the LRP Options window. This window contains two indicator buttons which can be toggled on and off by clicking them. The indicator shows green when the button is on, and black when the button is off.

#### Setting LRP options

If the **Alpha Sort Lists** button is on, all the list items in list windows subsequently displayed can be ordered alphabetically.

Selecting **Expand All** will expand all Router areas when a list window is opened. Selecting **Expand Local** will expand only the router Area for the currently selected Destination.

The Source alias options display the alias names as selected. This can be either on the Keycaps or the UMD's, neither or both.

Clicking the **Config Mode** button will display the LRP configuration window.

### Source Aliases

The **Aliases** button allows you to give the Source buttons alternative names.

#### Naming Sources with Aliases

1. Click the **Alias** button, scroll down to find the Source to name.

2. Select the Source and click the **Return** icon.

3. Enter alias name and click return icon to action changes.

# LRP Config Mode

The LRP can be configured to have the exact capabilities needed for a local work environment. Typically, operators will use a LRP that has been pre-configured for a particular purpose. Entering Config Mode offers addi-

tional functions. Typically these are only activated and de-activated by Encore system administrators.

## Accessing Config Mode Functions
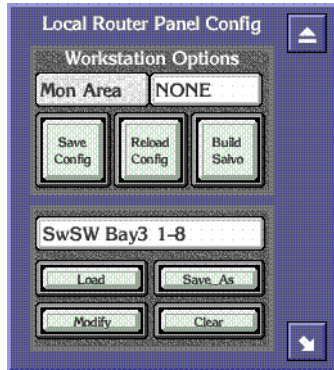
1. Click the **Option** button at the bottom of the screen.

2. Click on the **Config Mode** button. The Config Mode pane will appear.

This pane allows you to:

- Load, modify, and save LRP config files

- Access a Salvo builder,

- Select which Destinations appear on the LRP, and

- Activate and deactivate the Preview, Park, Mini-Pic, Alias, Salvos, and Interlevel buttons.

## Setting up LRP Destinations

1. While in Config Mode, left click on the **Destination** button you want to configure and open the folder in the list window displayed.

2. Select the Destination from the list offered and click the **return** icon.

3. Repeat for each button you wish to set up.

4. Close the config window and the options window.

- When this pane is displayed, you can also click on grayed out function buttons on the LRP to open an activation pane, allowing you to enable and disable that button.

## Global Routing

In Config Mode the Global pane is also displayed. Global routing provides a quick and simple way of selecting a Destination and Source from the entire list of those available.

### Using the Global X Button to Set a Route

1. Click the **Global X** button to display the Router Destinations list window, select a Destination. Once selected, this Destination then appears on the **Global X/Y** indicator button, highlighted in green.

2. Click the Under Monitor Display (UMD) below the **Global X/Y** button to display the Router Sources list window from which a Source can be selected. The Source then appears on the UMD. The X/Y routing remains established until it is changed or until the OUI workstation is switched off.

## Activating LRP Buttons
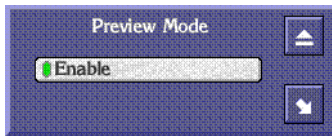


1. While in Config Mode, click on a grayed out LRP button. An activation pane will appear.

2. Click on the Enable button to activate or de-activate that button.

## To Preview a Route

1. Click the **Preview** button to toggle it on (button shows green).

2. Click and hold a new **Source** button to route to the new Source. The Source button will turn red whilst in preview mode.

3. Release the new **Source** button to revert to the initial Source.

**Note**    You cannot preview a protected Source. Attempts to do so will cause a message window to be displayed, informing you that previewing is not possible.

## Parking a Destination

1. Select the Destination to park.

2. Click the **Park** button.

The Destination will be parked, and the UMD below will display **Parked**, thus freeing the Source without losing the Destination.

# Setting up Salvos

**1.** Click the **Salvos** button to display the Salvos window.

*Figure 174.   window*
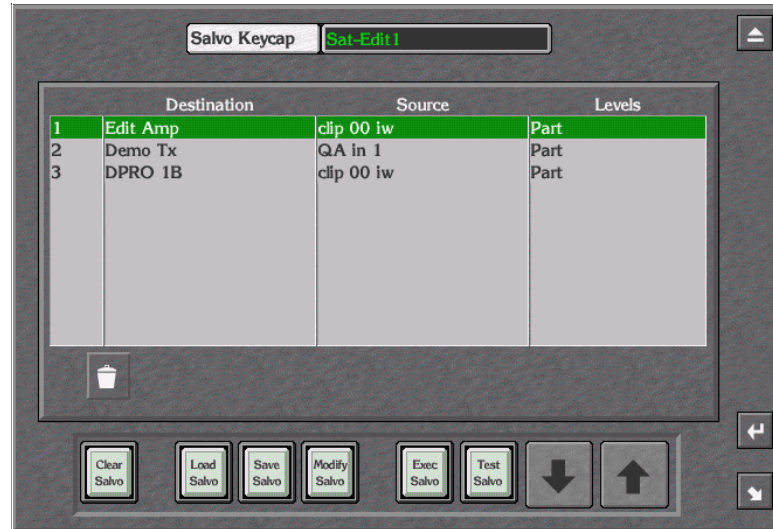


**2.** Click **Load Salvo** to edit an existing Salvo; **Delete Salvo** to delete the currently loaded Salvo; or **Clear Salvo** to clear any loaded Salvo and create a new one.

**3.** Click the **Salvo Keycap** button and enter the new Salvo name on the Keypad displayed. Press the return key when finished.

**Note** The Salvo keycap name must be identical to the Salvo filename saved in Step 7 below. The name entered in both locations must be must be 8 characters or less, not be a duplicate of an existing Salvo, cannot have spaces, and cannot contain the following special characters:
/ \ ; : , * ? " < > | ,

**4.** Click the **Dest** column and select the Destination required. You may need to open the folder to see the entire list of Destinations available.

**5.** Click the **Source** column and select the Source required. Again, you may need to open the folder to view all the Sources available or scroll back to the top of the list window.

**6.** Click in the **Levels** column of the Salvos window and select the Level required from the window displayed.

**7.** Click the **Save Salvo** button to save new Salvo, or the **Modify Salvo** button to save any changes that have been made.

**Note** The name of the saved Salvo file must match the keycap name entered in Step 3 above.

### Assigning a Salvo to a Button

1.  From the LRP select options and load **Config Mode**.

2.  Click the button to represent the Salvo.

3.  Select Salvo from list and press the **Return** icon, or select **Load new local salvo** and select, using the Filer-Fax window displayed, in the usual way.

4.  Repeat for each Salvo you want to load.

5.  Close Configuration window and LRP configuration window.

### Updating Salvos

Salvos are not dynamically updated. If you change a Salvo in the router configuration, you must update the Sharer's database manually using the following procedure.

1.  In the Router Control application, click the **Config** button on the Main Menu.

2.  Click the **Modify** button in the Load Save section of the window.

3.  Click the **Commit Changes** button in the Network section (on the left) of the window.

4.  Click the **Re-Sync Comms** button in the Hardware section (on the right) of the window.

5.  Click the **Router** button in the Hardware section (on the right) of the window.

6.  Click the **Matrix** button in the Hardware section (on the right) of the window.

### Other Operations for Salvos

Clicking the **Execute Salvo** button causes all the routes defined in the Salvo to be connected.

Clicking the **Test Salvo** indicator button toggles it on (button shows green), and off (button shows grey). When the button is green, all the routes defined in the Salvo are connected - the routes defined in the Salvo are returned to the previous state when the button is grey.

Clicking the **Page-Down** and **Page-Up Arrow** button scrolls down and up through the pages of routes defined in the Salvo. If the **Arrow** button is grey, then you can scroll no further in that direction. A white **Arrow** button signifies that more pages exist.

### Using Salvos for Frame-Accurate Takes

For frame-accurate Takes, you can send a Salvo with a timestamp to the Router Controller. This can be made even more deterministic by supplying the Encore SCB running the Router Control application and the routing clients with a VITC time-code reference. A routing client can send a Salvo of Takes to a Router Controller up to 512 frames before the Takes should occur. Advanced scheduling capabilities require an automation system.

#### Requirements

* Matrices attached serially to the Router Controller must support at least 38,400 baud connections for any degree of determinacy; 115K baud is recommended.

* For the highest degree of determinacy, the SCB running the Router Control application must be connected to a stable VITC feed. Encore SCBs support PAL, NTSC, and NTSC drop-frame formats.

* All Router Controller and Tie-Line Manager logging options must be disabled for optimal deterministic performance.

**CAUTION**  Logging to disk can seriously degrade deterministic performance and can fill up a hard disk quickly.

To Disable Router Logging...

**a.** Open the Router Control application in the Encore OUI.

**b.** Click the **Config** button on the Main Menu.

**c.** Click the **Logging** button.

**d.** In the Logging Options dialog which appears, toggle the logging options off and close the dialog.

To disable Tie-Line Manager logging...

**a.** Open the Tie-Line Manager application in the Encore OUI.

**b.** Click the **System** button on the Main Menu.

**c.** Click the **Full Logging** button.

**d.** In the Logging Options dialog which appears, toggle the logging options off and close the dialog.

#### Limitations

These limitations are dependent on third-party matrices attached to the Router Controller. Limitations will vary by manufacturer, model, and

configuration. Field tests should be performed on third-party equipment if maximum loading parameters are required.

- If serial communications are being used, the number of Takes that can be executed in a single frame is limited by the bandwidth of the serial channel between the Router Controller and the attached matrix.

- The number of Takes that can be executed in a single frame is also limited by the speed with which an attached matrix can respond to, and acknowledge Take commands.

- If the Router Controller is heavily loaded with Take commands, determinism of timestamped Takes may be affected, although timestamped Takes do take priority over non-timestamped Takes.

## Interlevel Routing

Interlevel routing provides the ability to swap Source Levels when routing to a Destination. The Interlevel routing panel is operated in the same way as the Breakaways.

1. Clicking the **Inter** indicator button toggles it on (indicator shows green), and off (indicator shows black). When this button is toggled on, clicking a **Source** button will display the **Interlevel Routing** window.

2. The **Interlevel Routing** window displays all the Source and Destination Levels applicable to the routing in two columns. Sources are on the left and Destinations are on the right. The Levels that are connected to one another are shown side by side in the columns.

3. Once the Levels have been set, clicking the **Route** button causes the Interlevel Routing window to disappear and executes the routing. The **Current State** indicator buttons in the Breakaways Area show yellow to reflect the interlevel route.

*Figure 175. Interlevel Routing Window;*

# Local Machine Control Panel (LMCP)

The Local Machine Control Panel provides local control of the devices that are available on the Encore Network. It also provides information on the status of selected devices.

**Note**  To use the LMCP you must have the proper software, and in some cases hardware components or peripherals, properly installed and configured on the device you wish to control. For example, to control a Grass Valley Group Profile, you must purchase, install, and configure the optional VDRCS application. Similarly, to control a VTR you must purchase, install, and configure the Serial Control Engine peripheral, the VSVC application, and an RS-422 serial (machine control) cable.

*Figure 176.  Main Screen*



The LMCP Main Screen has five areas:

- Device Selection area,
- Device Control area,
- Cue Points area,
- Clip area, and
- Ancillary area.

## Opening the LMCP

Click the Local Machine Control Panel icon on the Task Bar.

## Clip Area

The Clip Area displays information about the current clip, and enables you to work with clips. The information shown is **Clip Name**, **Duration**, **In Point** and **Out Point**.

Click the **Hold Duration** indicator button (to the right of the **Dur** Window) to toggle it on or off. When the button shows green, the clip duration remains constant. When the button shows black, the clip duration changes if the In/Out-Points change.

### Creating a New Clip on a Video Disk Server

1.  Load a disk device into the Devices panel.

2.  Click the **Create** button. The system displays the Clip types list window.

3.  Select the type of clip you require.

4.  Click the **Enter/Return** button.

5.  The window disappears and the system displays the Filer-Fax in save mode. You can name the clip, categorize and save it (see *Filer-Fax* on page 323 for more information).

**Note** If the selected device is a VTR, or if no device is selected, then the **New Clip** button is displayed in place of the **Create** button (see *Creating a New Clip on a VTR*).

### Creating a New Clip on a VTR

1.  Load a VTR device into the Devices panel.

2.  Click the **New Clip** button. The system displays the Clip types list window.

3.  Select a type for the new clip; then press the **Enter/Return** button.

4.  The system shows the default values for the selected clip type.

### Loading a Clip

1.  Click the **Load** button. The Filer-Fax appears.

**2.** Highlight the clip you want to load.

**3.** Click the **Enter/Return** button. The clip information appears in the Clip Area.

**Note**     Step 4 applies only if no device is selected in the Devices panel.

**4.** When the Select a Device list window appears showing devices that can load a clip, select one of the devices.

The Select a Device list window disappears. The system adds the device to the Devices panel and loads the clip.

**Note**     If you select 'No Device: Clip Data Only' from the list, a device is not added to the Devices panel but the clip data is still displayed. You can therefore alter the clip information rather than the media. Use this method of selecting a clip if you do not know whether a clip is on a tape or a disk.

## Modifying and Saving Clips

**1.** Click the **Mark In** button to change the in-point of the clip. The in-point will be changed to the time code reached at the moment you press the **Mark In** button.

**2.** Click the **Mark Out** button to change the out-point of the clip. The out-point will be changed to the time code reached at the moment you press the **Mark Out** button.

**3.** To rename a clip, click the **Clip Name** window and enter a new name on the displayed Keypad.

**Note**     New in-points and out-points are not recorded unless you modify or save the clip.

**4.** Save the clip by either:

• Clicking the **Modify** button to save over the current clip.

- Or -

• Clicking the **Save** button to save a new instance of the clip.

## Device Selection and Control

The Device Selection Area consists of an 8-slat panel for selecting and displaying the names of up to eight devices, and two buttons to add or remove devices to or from the list.

## Setting Options

Before you can select options for a device, you must add them to the Devices panel.

### Adding a Device

1.  Highlight an empty slot.

2.  Click the **Add** button to display the devices list window.

    *   If **Use Object Database** is switched off in the Ancillary Options window (the Button indicator shows black), the list shows all devices (Video Disk Servers and VTRs) currently available on the network.

    *   If **Use Object Database** is switched on (the Button indicator shows green), the listed devices will be ones which are configured within the object database; any given one of these may or may not be available on the network — the system will check when you select one.

3.  Select the device you require by highlighting it and pressing return.

Once a device is selected, the list window disappears and the new device name is shown in the Devices panel.

### Removing a Device

1.  Highlight the slot displaying the device you want to remove.

2.  Click the **Remove** button. The button then becomes blank and is free for another device.

## Automatic Control

Using automatic control it is possible to record from a live feed to more than one Destination at once, or to transmit several clips simultaneously. It is also a useful way of copying a clip to different locations.

### Playing and Recording Clips

1.  Add the devices you require to the Devices panel and Lock them.

2.  Route the required Sources to the correct Destinations.

3.  To record, you must create a clip for each device; to play, load a clip to each device. You can execute both operations together providing the resources required are available.

4.  Click the **Record** button to record, or the **Play** button to transmit.

5.  Click the **Auto Start** button to automatically start all devices. The button text changes to **Auto Stop**.

**6.** Click the **Auto Stop** button to automatically stop all devices.

### Copying (Dubbing) a Clip to a New Location

**1.** Add the destination and source devices to the Devices panel and Lock them.

**2.** Load a clip onto the source device and set the play flag.

**3.** Create a clip on the destination device (see *Creating a New Clip on a Video Disk Server* on page 299), give the clip an appropriate duration and set the record flag.

**4.** Ensure that you route the Source to the correct Destination.

**5.** Click the **Auto Edit** button to automatically start the devices. The button becomes yellow while devices are cueing. The button becomes green once cueing is complete.

**6.** When the edit is complete, click the **Auto Edit** button.

**Note**    You can execute this action by using the **Auto Start** button. The LMCP always refers to the currently selected device, even if another user has locked the device.

## Time Base Correction Panel

If the currently selected device is a VTR, click the **T.B.C.** button (Time Based Corrector) to display the **T.B.C.** window. You can adjust the output Levels of the signals by using this panel. Click the scroll bar or the arrows on either side. Move the bar to the right to increase the Level. Move the bar to the left to decrease it.

*Figure 177.  Time Base Correction window*



### Setting Time Base Correction

**1.** The **Preset** indicator button shows if the default setting is on (indicator shows green) or off (indicator shows black) and can be selected for individual signals. If a signal is using the preset value, changing this value automatically switches off the preset option.

2. Click the **Video** button to adjust the output Level of the video signal. This can be regarded as adjusting the brightness.

3. Click the **Chroma** button to adjust the output Level of the chrominance signal. This can be regarded as adjusting the color.

4. Click the **Y/C Delay** button to adjust the Y/C delay. This can be regarded as adjusting the synchronization between the luminance and chrominance.

5. Click the **Black Level** button to adjust the black Level. This can be regarded as adjusting the darkest part of the picture, which has reference 'Black'.

6. Click the **Chroma Phase** button to adjust the chroma phase. This can be regarded as adjusting the hue.

## Using the Device Control Area

This area of the screen is used to control the device currently selected in the Devices panel. The identity of the device is shown in the label at the top of the Control Area.

The **Guard** button disables all the control buttons. It prevents you operating the controls accidentally; for example, pressing **Stop** when a clip is playing to air. While the button is activated the control buttons are greyed out. The indicator shows green if the device is guarded, and black if it is not.

The **No Media** indicator button shows if a VideoDisk has a clip currently loaded or if a VTR device has a tape loaded. The indicator shows green if the device is empty, and black if it is loaded.

The **Rec Inhibit** button shows if the currently loaded clip can be recorded into or edited. The indicator shows green if recording is inhibited; it shows black if you are able to overwrite or edit the clip.

The **Local** button shows if the currently selected device can only be operated locally. The LMCP enables you to operate a device remotely, but circumstances may be such that a device must be operated locally. For example, an engineer may require it for maintenance purposes. The indicator shows green if the device can only be operated locally; it shows black if you can operate it remotely.

The **Time code Display** window shows the time code status of the currently selected device, even if another user has locked it.

You can use the Clip Progress Bar (located directly below the Time code Display) to move quickly to an approximate position in the clip that is currently playing and pause the clip there.

## Transport Control Buttons

The transport control buttons represent the buttons of a video tape recorder: clicking the **Pause** button pauses the currently selected device, clicking the **Play** button plays the loaded clip, and so on. When you click a button it shows white. The button is automatically deselected and shows grey if you click another button. There are shortcut keys for Record, Play, Rewind, Fast-Forward and Stop, which are equivalent to clicking the buttons — see *LMPC Shortcut Keys* on page 322.

### How to Record Using the Transport Control Buttons

**CAUTION**  The procedure you should follow depends on the device you have installed. We describe a typical procedure below, but it may not apply to your installation.

1. From the Devices panel select a device to record to (destination device).

2. Select which tracks to record with the **Recording Mode Selection** indicator buttons.

3. Click the **Lock** indicator button to Lock the device if this is required.

4. Click the **Create** button. The system displays a list of clip types.

5. Choose a clip type. The system displays the Filer-Fax.

6. Select the categories you require. See *Filer-Fax* on page 323 for more information.

7. Save the clip by pressing the **Save** button.

8. Click the **Preview** indicator button to switch it on (button becomes green), or off (button becomes grey) as required.

9. The currently selected device is ready to record. Click the **Record** button to start recording.

10. The LMCP records into the clip you created using whatever Source is routed to the destination device.

### How the Other Controls Respond

Clicking the **Eject** button ejects what is loaded in the currently selected device; the button shows white. Any information referring to the clip in the Clip Area disappears. If the selected device is a VTR, the tape is ejected.

Clicking the **Rewind** button rewinds the clip that is loaded in the currently selected device; the button shows white. Once rewinding is complete, the **Rewind** button shows grey and the **Pause** button is automatically selected and shows white.

Clicking the **Play** button plays the clip in the currently selected device — the button shows white. Once play-out is complete, the **Play** button shows grey and the **Pause** button is automatically selected and shows white.

Clicking the **Fast Forward** button fast-forwards the clip that is loaded in the currently selected device; the button shows white. Once fast-forwarding is complete, the **Fast Forward** button shows grey and the **Pause** button is automatically selected and shows white.

Clicking the **Stop** button stops the currently selected device; the button shows white.

The **Shuttle Bar** provides incremental control of the currently selected device.

# Cue Points Area

The Cue Points Area enables you to recall a clip at relevant points within the clip. The functions of the different buttons are described below.

# Using the Cueing Control Buttons

1. Load a clip.

2. Play the clip.

3. Click the **Set** button so it becomes green.

4. Click one of thee **Cueing Control** (**M1** to **M6**) buttons to store the time code of a point in the clip. The **Set** indicator button becomes grey. (You can pause the clip at the point before storing the time code if you want to.)

5. Click the **Set** button (so it becomes green) and then a **Cueing Control** button for each time code you want to store.

6. While the **Set** button is grey, clicking a **Cueing Control** button pauses the clip at the stored time code.

7. Click the **Go To** button and enter a time code in the Keypad displayed. The clip pauses at that time code.

8. Click the **In** button or the **Out** button to pause the clip at the marked-in or marked-out point.

**Note**     The Cueing Control buttons store the time codes you allocate to them. The time codes are not stored with the clip, and are only retained during the LMCP session in which you define them. They are lost if you overwrite them or if you switch the OUI workstation off. If you load a new clip, the stored time codes apply to this also.

# Ancillary Area

The buttons in the Ancillary Area are used to access specific functions of the LMCP application.

## Routing

If any devices in the device panel are loaded with the object database and have their routing information correctly configured, pressing the **Routing** button displays the Local Router Panel; the devices are displayed as Router Destinations. A warning message appears if no such devices are loaded.

## Options Button

1.  Click the **Options** button to display the Options window.

2.  Click the first button bar to select the option for creating daughter and clone clips.

3.  Switch on the **Load virtual clip** indicator if you want to activate this option.

4.  Click the **Size** button to set the default duration of a new clip.

5.  Select either the **Filer Loading** or **List Loading** option by clicking the respective indicator buttons; an indicator shows green to highlight your choice. (See *Filer-Fax* on page 323).

6.  Switch on the **Modify Clip Options** button (so its indicator shows green), if you want the system to update the current clip options when you change the clip type. If you do not switch it on, the system leaves the clip options unchanged.

7.  Click the **Mode** button to select the routing option required; the selected option is displayed in the button bar.

8.  If you select Auto Mode, click the **Dest** button to display the Router Destinations list window and select one of the available router Destinations. The one you select is shown next to the **Dest** button. If you select Manual Mode, the **Dest** button is unavailable.

9.  Select **Use object database** if you want the LMCP to use the object database — you need special system privileges to change this setting.

*Figure 178. Options window*
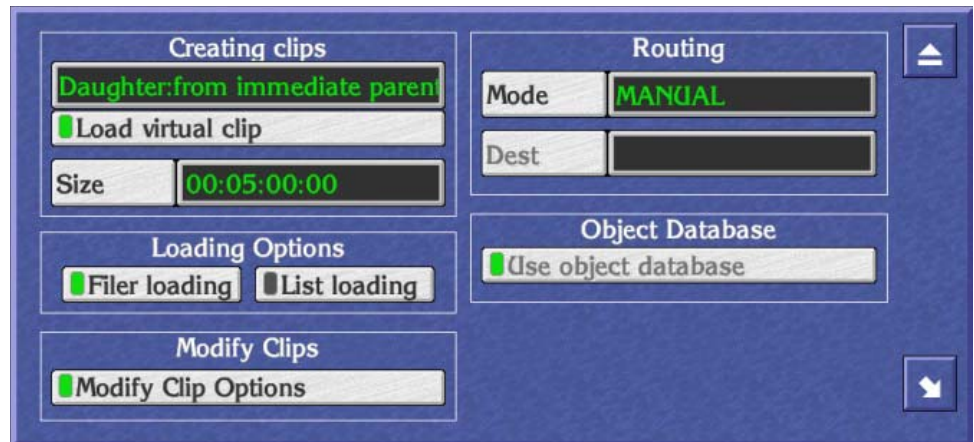


## Dubbing Button

The LMCP provides a dubbing function that is only available if dubbing servers (e.g., Transfer Manager) are configured on the Encore system. The Dubbing Service acts as a central coordinator for the automatic transfer of material from one device to another; for example, from a Cart Machine to a VideoDisk Server, or from disk to an archive medium.

The **Dubbing** button shows green if there is a Dubbing Server configured on the Encore system. If there is no Dubbing Server, this button shows grey.

*Figure 179. Dubbing Service Window*
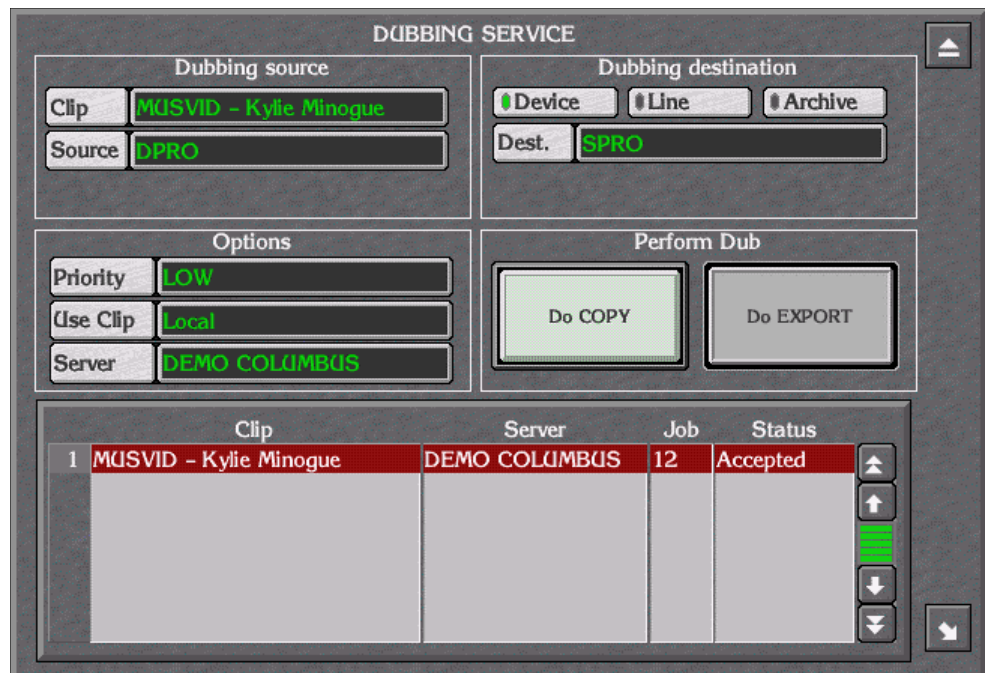
Use the Dubbing Service window to dub the clip that is loaded on the current device or to dub any other Encore clip.

### Selecting a Clip and Source

1. To dub a clip currently loaded onto an LMCP device:
   In the LMCP Devices panel, select the device from which you want to dub the clip; then set the **Use Clip** button to "From Device". Go to Step 3.

2. To dub any other clip:
   Click the **Clip** button. Filer-Fax displays a list of clips; select one. The system shows the new clip name on the **Clip** button, and its **primary location** in the source field. The **Use Clip** button automatically changes to "Local". If you want to select a different source, click the **Source** button and select one from the displayed list.

3. If the clip is on tape, click the **Group (Source)** button and select the VTR group from the displayed list.

4. Select where you want to dub the clip by clicking one of the buttons:
   **Device**
   **Line**
   **Archive**
   Selecting **Device** displays a list of all devices on the system; select one.

5. Click the **Dest**. button and select a Destination.

   If you click the **Archive** button, the system automatically configures the Destination.

   a. If you select a VTR device, the **Tape** button appears; click the button and select from the displayed list the tape you want to dub to.

   The system automatically chooses a dubbing server and displays its name next to the **Server** button.

   a. To change the server, click the **Server** button and select from the displayed list.

   If there are no suitable servers or if the Source and Destination are not fully set up, the system displays "None Suitable" next to the **Server** button.

6. Click the **Priority** button to select the degree of importance of the dub.

7. Click the **Do COPY** button to perform the dub and log the existence of the clip in its new location. The system displays a message window confirming the job number and time when the dub should take place.

   Or

8. Click the **Do EXPORT** button to perform the dub without keeping a record of the dubbed clip.

**9.** The job list at the bottom of the Dubbing Service box shows details of all current jobs. Jobs automatically disappear from the list as they are completed.

### Deleting a Dubbing Job

**1.** Click the name of the clip in the job list to display the Delete Dub window.

**2.** Click the **YES** button to delete the job.

**Note**    Once the system executes a dub, the dubbing server cues up and routes the different devices to copy the clip. If you use **Do COPY**, the system updates the Location List to show both the old and new locations of the clip.

# Clip Assistant

The Clip Assistant application is an additional feature of the Local Machine Control Panel (LMCP). It allows you to register new tapes in the system, to modify information about existing clips, and to acquire new clip information from tape without the need to claim a device.

Clicking the **Clip Assistant** button displays the Clip Assistant screen. If the **Clip Assistant** button is greyed out, the Clip Assistant is not available on your version of the LMCP.

## About Clips

Every piece of media (or stored information), regardless of its duration, is known as a **clip** within the Encore environment. For example, a clip can be moving pictures with sound, a still, a caption, a piece of audio, even a camera position recall. Once a clip has been created, it is stored in the Encore Database, and can be edited and managed using Encore applications. The LMCP is an application designed to deal with moving video and audio. It can be used to create and modify clips.

Clips can be classified as a **Clone**, a **Parent** or a **Daughter** clip.

### Clone Clips

Also known as a Copy clip, this is a duplicate of a clip, or part thereof, and can be saved under a different name to that of the original. The original clip can be deleted from the system leaving the clone intact.

### Parent Clips

A Parent Clip is the original recorded material (pictures or audio) found on tape or disk. When a Parent Clip is logged into the Encore system, its name has to be specific and unique in order to identify it for future use.

**Daughter Clips**

There are two types of Daughter Clip.

**Type A** Daughter Clips are defined by specifying a certain piece of a Parent Clip. This is done with the LMCP by marking a start point (In-Point) and an end point (Out-Point), and saving this information with a new name. The Parent Clip is not re-recorded; only the new In/Out-Points relative to the original Parent Clip are saved along with a new name. If the Parent Clip is subsequently modified or deleted, the Type A Daughter Clip may be lost.

*Figure 180. Type A Daughter Clips*
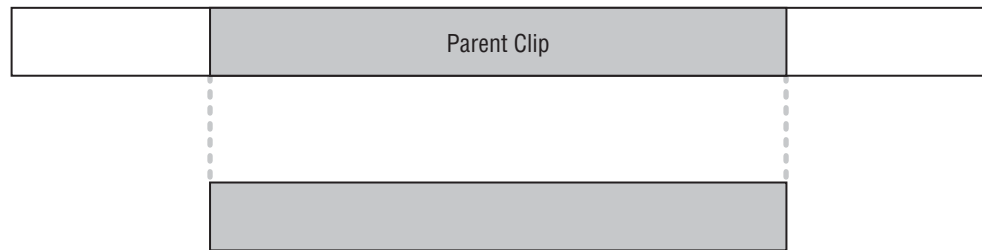


**Type B** Daughter clips are edited pieces of media, made up of a series of different daughter clips sourced from the same, or from different, parent clips. If you delete or modify a parent clip, the daughter clip may be lost.

**Note** You can't create Type B daughter clips on the LMCP.

*Figure 181. Type B Daughter Clips*
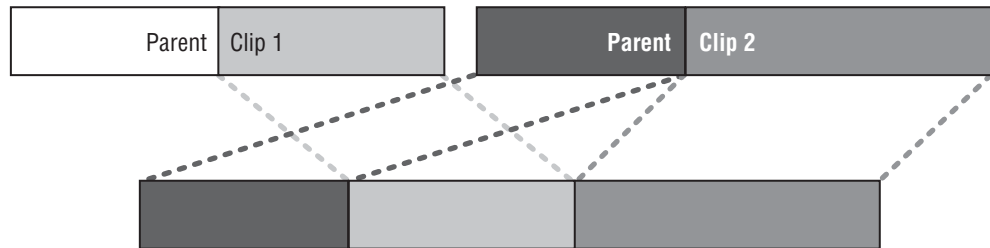


You can access the Clip Assistant from the LMCP; switch between the two applications to use the functions that are appropriate to your work session.

## The LMCP Screen with Clip Assistant Active

The Local Machine Control Panel is slightly different when Clip Assistant is activated. The Device Selection Area is reduced to make room for a Tape Area, and the Cue Points and Ancillary Areas are replaced with the Clip Assistant Panel.

*Figure 182. Local Machine Control Panel Showing the Clip Assistant active*
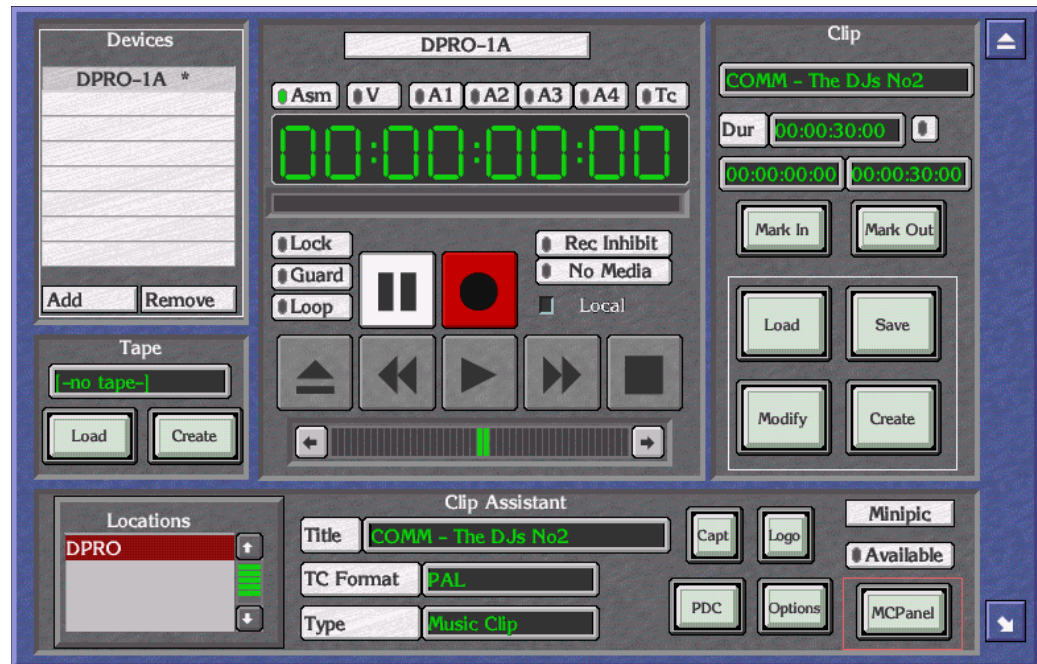


The Clip Assistant Main Screen has five areas:

- Clip Assistant Devices Area,

- Device Control Area,

- Clip Area,

- Tape Area, and

- Clip Assistant Area.

**Note**     The Device Control Area and Clip Area are identical in appearance and func-
tionality to those areas of the same name on the LMCP Main Screen (see *Clip
Area* on page 299).

## Clip Assistant Device Selection

The Device Selection Area reduces when you press the **Clip Assistant** button.
The area consists of the 8-slat panel for selecting and displaying the names
of the devices, and the **Add** and **Remove** buttons. These operate in the same
manner and are detailed in *Device Selection and Control* on page 300.

**Note**     The Clip Assistant always refers to the currently selected device, even if
another user locks it.

## Tapes

Use the Tape Area to select tapes (from the tape database) onto which you can record or mark up additional clips. You can also register new tapes. This window shows the ID of the currently loaded tape.

### Loading Registered Tapes

1. Click the **Load** button. The system displays the Filer-Fax in Load Mode. The Filer-Fax shows all tapes that exist in the system.

2. Select a tape in the usual way. The system shows the tape ID in the Tape ID window.

**Note** The system does not load a tape into a device, just the tape information.

Each VTR device can have a tape loaded. If you switch between VTR devices, the system may show a different tape in the Tape ID field.

You cannot load tapes onto non-VTR devices. In the case of non-VTR devices, the system displays **[- no tape -]** in the Tape ID field.

The LMCP can process tapes without loading them onto a VTR device. If you want it to do this, select an empty slot (on the device panel) and click the **Load** button. You can then access the tape from any of the blank slots. This tape becomes the primary location for any clips that you save if you don't select a specific device.

### Registering a New Tape

1. Click the **Create** button to display the **Register Tape** window

*Figure 183. Typical Register Tape Window*



2. Click the **Tape ID** button to display the Alphanumeric Keypad. Enter the tape name (max. 31 characters).

3. Click the **Location** button to display the Alphanumeric Keypad. Enter the name of the physical location.

**4.** Click the **Format** button and select a format from the options displayed.

**5.** Click the **TC Format** button and select the timecode format to be used.

**6.** Click the **Start TCL** button and enter the timecode at the start of the tape.

**7.** Click the **Duration** button and enter the length of the tape.

**8.** The **Time Left** button shows the amount of time left on the tape.

**9.** Click **Create Cat** to create a category for the tape.

The category name will be the same as the tape name. The clips associated with the tape will also have this category. If you do not click this button, the tape and its clips will not have a category.

**10.** Select the type of tape by pressing the **Original** button, the **Multi Segment** button, or the **Blank** button.

## Clip Assistant Area

The Clip Assistant Area contains various parameters associated with the clip — these relate to its later transmission.

*Figure 184. Typical Clip Assistant Area*



The **Locations** List shows all the locations where the currently loaded clip exists. At the top of this list is the primary location for the clip; i.e., the first location registered for the clip by the Encore system.

**Note**     You cannot delete the primary location. No warning message window is displayed if you click this. If the location is secondary, a warning message window gives the option of deleting the clip from the chosen location.

### Amending the Details of a Clip

**1.** Click the **Title** button to change the name of a clip.

**2.** Click the **TC Format** button and select a timecode format from the options displayed.

**3.** Click the **Type** button to display the Clip types list window, which allows the type to be changed.

**Note**  Each clip type is associated with a pre-defined set of attributes, which can be viewed and changed by clicking the **Options** button (see page 306). If the Modify Clip Options button is set On in the LMCP Ancillary Options screen, the system changes all clip options to reflect those of the new clip type.

### Captions (Capt.) Button

Clicking the Captions (Capt.) button displays the Captions window.

*Figure 185.  Captions Window*



The Captions window has the following three areas:

- Title Page Selection,
- Mark In / Mark Out Area, and
- Text Area.

Each clip can have up to twelve captions. Click the **Up** and **Down Arrow** icons to scroll through the captions. The green number to the left of the arrows indicates the number of the caption currently displayed.

The window underneath the **Mark In** and **Mark Out** buttons displays the duration of the currently selected caption. The Text Area consists of the **Use Page** controls (at the top), and six text windows for the caption text.

#### Changing the properties of a caption

**a.**  Click the **Mark In** window to display the Caption In-Point Keypad which enables you to change the in-point of the caption.

Or

Click the **Mark In** button to change the mark-in point to the timecode shown in the large Timecode Display window.

**b.**  Click the **Mark Out** window to display the Caption Out-Point Keypad which enables you to change the out-point of the caption.

Or

Click the **Mark Out** button to change the **Mark Out** point to the timecode shown in the large Timecode Display window.

**c.** Select a number with the **Use Page** controls to select the corresponding page in the Caption Generator.

**d.** Click any of the six **Text** windows to display a Keypad that enables text to be added.

### PDC Information

The **PDC** button allows Programme Delivery Control category information to be associated with a clip. Each clip has two categories: a Major Category and a Minor Category (which is a subdivision of the Major Category).

Clicking the **PDC** button displays the Current PDC Type window.

*Figure 186.  Typical Current PDC Type Window*



#### Categorizing Clips

**a.** Click the **Major Category** button to display the Select Major Category list window.

Once the Major Category has been selected, it is shown on the **Major Category** button. The Select Major Category list window is replaced by the Minor Category list window appropriate to the Major Category selected.

**b.** Select the required Minor Category. Once selected, it is shown on the **Minor Category** button.

**Note**     If you click the **PDC** button and there is no PDC information associated with the clip (this is set using the **Options** button), the OUI displays a warning message.

### Logos

The **Logos** button is used to define set points in a clip for the displaying of Logos or the triggering of General Purpose Interfaces (GPIs). Clicking the **Logos** button displays the Select Logos and GPIs window.

*Figure 187.  Select Logos and GPIs Window*
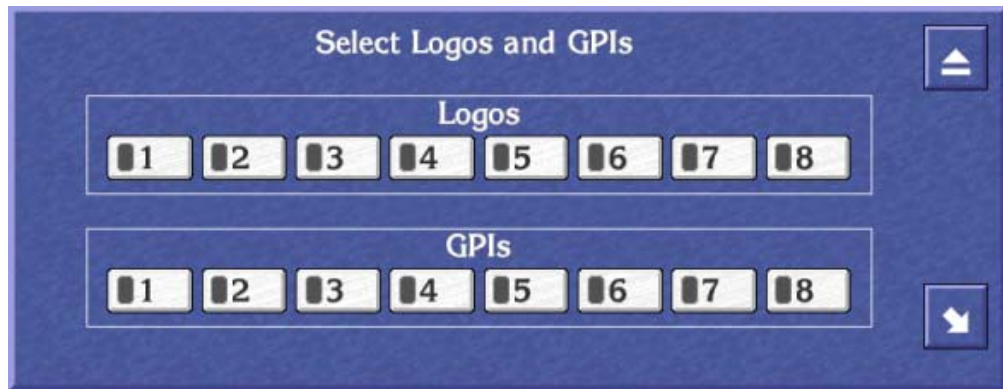


This window shows eight numbered **Logo** indicator buttons, and eight numbered **GPI** indicator buttons. Each button can be clicked to toggle it on (indicator shows green) and off (indicator shows black). Each numbered button represents a pre-configured logo or GPI, which will be assigned to the current clip if the button has been toggled on. For example, **Logos1** button may be configured to display the station logo for five seconds commencing three seconds after the start of the clip. When the clip is loaded into Columbus, the selections made in the Select Logos and GPIs window are recognized and activated at the required points.

## Clip Options

The **Options** button allows various attributes to be associated with the clip. Most of these options are activated when the clip is used by Columbus for transmission. Clicking the **Options** button displays the Select Clip Options window.

*Figure 188. Typical Select Clip Options Window*



**Setting Clip Options in Clip Assistant**

1. Click the **Use Group** button and select the device group from where the clip is to be played out; e.g., a Video Disk Server or a group of VTRs.

2. Click the **Loop** button to toggle it on (indicator shows green) or off (indicator shows black).

3. Click the **Suppress Logos** button to toggle it on (indicator shows green) or off (indicator shows black).

4. Select the cache option you require: click the **Always Cache**, **Never Cache** or **Hold Cache** indicator button.

5. Click the **Pre Compile** button to mark the clip with the Pre Compile flag.

6. Click the **Delete After Use** indicator button to toggle it on (indicator shows green) or off (indicator shows black).

7. Click the **Archive After Use** indicator button to toggle it on (indicator shows green) or off (indicator shows black).

8. Click the **Mirror** button if you require this option.

9. Click one of the **Audio** buttons (**A1**, **A2**, **A1/A2** or **Mono**) to select the audio option you require.

**10.** Click the **Use Before** indicator button to toggle it on (indicator shows green) or off (indicator shows black).
If you switch the button on, a date appears underneath. Click the date and change it to the one you want using the Alphanumeric Keypad.

**11.** Click the **Use After** button to toggle it on (indicator shows green) or off (indicator shows black).
If you switch the button on, a date appears underneath. Click the date and change it to the one you want using the Alphanumeric Keypad.

**12.** Select the **Use Captions** indicator button to use any captions assigned to the clip.

**13.** Select the **Use Subtitles** indicator button to use any subtitles that have been assigned to the clip.

**14.** Click the **Widescreen** button to choose the widescreen picture format.

**15.** Click the **Aspect Ratio** button and select a ratio from the list offered.

**16.** Select the **PDC** indicator button to transmit this information to Columbus with the clip.

**17.** Click the **Clip Quality** button and select the quality to be used from the list window displayed.

**18.** The **Daughter Clip** indicator shows if the clip is a virtual clip.

**Note**     The clip quality referred to as 'NORMAL' is the default, and is configured by an engineer to a pre-determined value.

## Video Transitions

The Video Transition Area handles the visual way in which the clip begins and how the previous clip ends. The **Video Transition** button shows the type of transition and the small window to its right shows the duration.

Clicking the **Video Transition** button displays the Video Transition window:

*Figure 189.  Video Transition window*

**Selecting Video Transition Options**

1. Click the **Duration** button to display the Default Duration Keypad. Enter a value for the duration of the video transition.

2. Click the **Wipe** button to activate this option; the button becomes green.

3. Click the **Wipe Number** button to display the Wipe Number Keypad. Enter the number of the wipe effect you want to use with the transition. **Note:** You can only do this if the **Wipe** button is green.

4. Click one of the six **Transition Type** buttons to select a type of transition.

## Audio Transitions

The Audio Transition Area handles the way in which the audio tracks on the clip begin and how the audio tracks on the previous clip end. The **Audio Transition** button shows the type of transition and the small window to its right shows the duration.

Clicking the **Audio Transition** button displays the Audio Transition window.

*Figure 190.  Audio Transition*



**Selecting Audio Transition Options**

1. Click the **Duration** button to display the Default Duration Keypad. Enter a value for the duration of the audio transition.

2. Click one of the six **Transition Type** buttons to select a transition.

## Other Transition Options

1. Click the **No video** button to enable or disable the video signal in a transition.

2. Click the **No audio** button to enable or disable the audio signal in a transition.

**3.** Click the **Split** button to display the numeric Keypad; enter a value for the delay between the in-points of the audio and video signals in a transition.

### Available Button

Use the **Available** indicator button to mark a clip as being available for transmission. Click the button to toggle it on (indicator shows green and the clip is available), or off (indicator shows black and the clip is unavailable).

### Minipic Button

Use the **Minipic** button to display a still of the current clip at the current timecode. (A minipic server must be available.)

### Returning to the standard LMCP layout

Click the **MCPanel** button to return to the standard Local Machine Control Panel display.

## Acquiring Media By Scanning

The Clip Assistant can acquire media by scanning barcoded tapes. Two formats are supported: Long Sony Barcode and Odetics.

Odetics barcode format only contains the ID number of the tape on which it is located. Thus, only the tape information will be registered by the Clip Assistant.

Long Sony Barcode, as printed by a BVBP-12/14 barcode printer, enables the following information to be acquired by the system:

- Tape ID,
- Tape type (e.g., Multi-segment / Single segment / Other …),
- In-Point, and
- Duration.

Scanning the tape causes the following window to appear.

*Figure 191. Typical Information Read From Barcode Window*



The top area of this window is identical to the Register Tape window in both appearance and functionality. Relevant information from the barcode scan is shown on the buttons. The bottom area, labelled Clip details from barcode, shows the registered clip details (this only applies if the tape is single segment).

### Changing the Clip Details

**1.** Click the **Name** button to display the Enter New Clip ID Alphanumeric Keypad; using this you can change the clip ID.

**2.** Click the **Title** button to display the Enter New Clip Title Alphanumeric Keypad; using this you can change the title.

## Exiting the Local Machine Control Panel

You may exit the LMCP at any time by clicking the **Eject** icon in the top right corner of the screen.

## Memory of the LMCP

When you switch off the OUI workstation, the system saves all of the LMCP options.

## Remote Control of the LMCP

Another application such as Lines Record may remotely open an LMCP display with devices that it chooses. When it does, it displays an **alt** LED at

the top of the device selection panel and disables the Add button. Devices already in the LMCP are not removed. You can return the original LMCP display either by clicking the LMCP icon on the Task Bar or by pressing the up arrow key on the keyboard.

## LMPC Shortcut Keys

Shortcut keys are keys on your workstation keyboard which you can press instead of using the mouse to click buttons on the screen. The position and functionality of these keys for the LMCP are shown in Figure 192.

**Note** If you are not using a UK Keyboard, the keys found in the same position as those detailed have the same shortcut functionality.

*Figure 192. Shortcut keys for the LMCP*
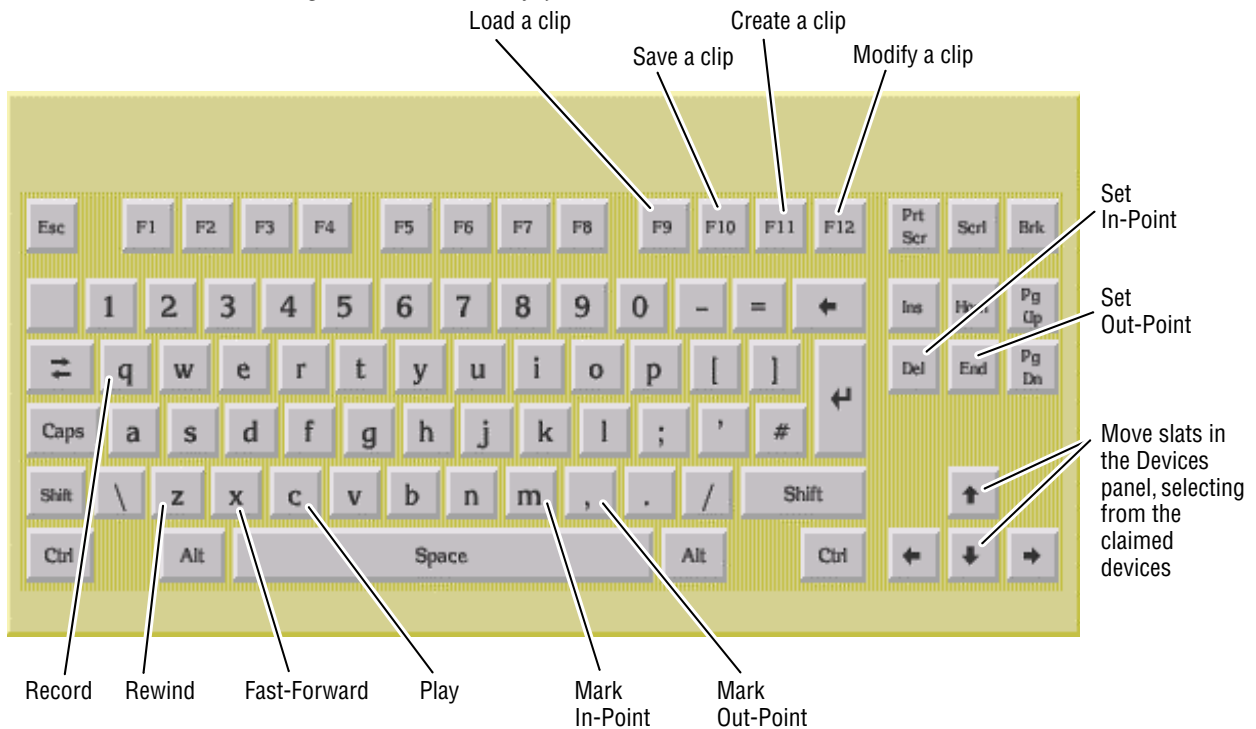
# Filer-Fax

## Overview

Filer-Fax enables you to manage on your Encore System. For example, you can use the Filer-Fax to filter and select clips to load via the LMCP.

## Terminology

**Files** are where data is kept. They are best thought of as folders, rather than actual files, and may sometimes be referred to as folders.

**Data Files** are the actual files where physical data is stored. These are placed inside Files, allowing many different Data Files to exist in a single File.

**Categories** are key words, used to ensure that Files are properly defined and easily found. Multiple categories may be tagged to a File. This allows single Data Files to be found in large databases of Files, using Categories as filters in the search. Control panel configurations are automatically tagged with the **CPS CONFIG** and **DATABASE** categories.

The Filer-Fax Main Screen (Figure 193) has:

- A filter window and control buttons on the left.

- A list window (showing either categories or files) on the right.

*Figure 193.  Typical Main Screen*
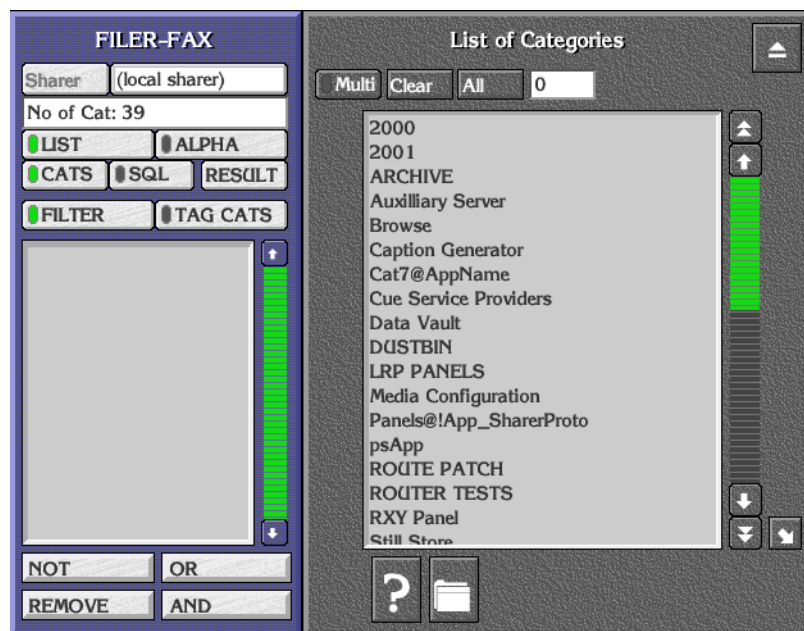
## Opening Filer-Fax

Click the Filer-Fax icon on the OUI Task Bar to load the Filer-Fax.

## Multi-Domain Networks

A multi-domain network is a network with more than one Sharer. In a multi-domain network, you can use Filer-Fax to manage the files that reside on Sharers other than your local Sharer; that is, files in other domains.

To work with the files on a particular Sharer, click the Sharer button. Select a Sharer from the list displayed by the application.

## File-Maintenance Mode

The Filer-Fax opens in file-maintenance mode. It displays a screen which is used to show files from selected categories and to perform file-management tasks; for example, tagging files to certain categories. Through the use of filters it is possible to select files with similar properties.

### Filtering

You can view certain types of file by specifying categories. This is known as filtering and is done by applying Boolean Logic to the categories. You use the Boolean operators AND, OR, and NOT to define the filter; these appear in the filter window between '<' and '>' symbols. The following example illustrates filtering.

Suppose only three files and three categories exist, and the files are tagged to the categories as shown in this file categorization example.

|  |  | News | Sport | 1997 |
|---|---|---|---|---|
|  | **Clip A** | X | X | X |
| **Files** | **Clip B** | X |  | X |
|  | **Clip C** |  | X | X |

The following table shows examples of filters you could create and the corresponding files which would be displayed.

| Filter Applied | Files Displayed |
|---|---|
| 1997 | Clip A, Clip B, Clip C |
| News <AND> Sport | Clip A |
| News <OR> Sport | Clip A, Clip B, Clip C |
| News <NOT> Sport | Clip B |

An example of a more complex filter is:

```
News <AND> 1997 <NOT> Sport <OR> Travel
```

This displays all News stories from 1997, apart from Sport, and all Travel stories.

**Note**  The application interprets the filter logic from left to right (or from top to bottom as the categories appear in the filter window).

The simplest filter is a single category. From the List of Categories, you select one by: either double-clicking it; or highlighting it and pressing the **Enter/Return** key on the Keyboard. The files tagged to that category appear in the File Maintenance window.

You can modify the filter by displaying the List of Categories, highlighting the required category, and clicking a **Logic** button.

**Note**  The system automatically tags some files to certain categories, depending on the file type and the application used to create the file. It is not possible to remove a system category from the filter if it has been added by an application.

## Automatic Filters

The **DUSTBIN** and **ARCHIVE** categories are used in a special way. They are automatically added to every filter by default, and are preceded by the logical flag <NOT>. So the filter always requests the files not dustbinned and not archived. Archived files appropriate to the filter can be added to the File List by switching on the **ARCHIVE** button in the File Maintenance window.

**Note**  The **DUSTBIN** and **ARCHIVE** categories can also be added to the filter by explicit instructions from you; e.g., if you wish to view only the archived files which match the filter, you must add <AND> ARCHIVE to the filter.

## Filter and Tag-Cats Modes

You can toggle the **FILTER** and **TAG CATS** buttons to show two different views of the database; this enables you to tag and untag files to and from different categories.

## Logic Buttons

When you select a category and add it to the filter using the **NOT** button, <NOT> precedes the category in the filter. (You can also use the '-' key on the Keyboard as a shortcut.)

When you select a category and add it to the filter using the **OR** button, <OR> precedes the category in the filter.

When you select a category and add it to the filter using the **AND** button, <AND> precedes the category in the filter. (You can also use the '+' key on the Keyboard as a shortcut.) By default the first category added to the filter is preceded by <AND>.

The **REMOVE** button removes any categories highlighted in the filter window. Double clicking this button clears the filter window.

The **LIST** and **ALPHA** buttons change the viewing format of the file and category lists. Selecting **LIST** formats each list in a plain alphabetical sequence. Selecting **ALPHA** adds **Alpha-Selection** buttons to help you navigate through the list. You can toggle between the two formats by clicking the **LIST** or **ALPHA** button; the button indicator shows green to highlight your choice.

**Note**     Clicking an **Alpha-Selection** button displays items beginning with the letters on that button; e.g., the **CD** button displays an alphabetical list of items beginning with the letters 'C' and 'D'. You can also use the Keyboard to navigate through the list.

### Managing Categories with Filer-Fax

Use the Filer-Fax buttons to manage categories:

**CATS** — select the categories you require from the List of Categories. Use the logic buttons (**NOT, OR, REMOVE, AND**) when you select multiple categories.

**Clear** — cancel all selections.

**Multi** — highlight more than one item in the list.

**All** — highlight all items in the list. The system displays the number of items you've selected in the window next to the button.

**Request Information** icon (**F2**) — display the File Information window (single selection only).

**Create Category** icon (**F6**) — name a new category (Category List Window only).

**Archive** button (indicator shows green) — add archived files to the file list.

**Tag/UnTag** icons — tag selected files to/from categories.

## Searching for Files Using Filters

1.  Click the **FILTER** button.

2.  Click the **CATS** button to show the List of Categories.

3.  Select categories to include in the filter; combine them by clicking logic buttons.

    The File Maintenance window appears showing the file list that results from applying the filter.

4.  Click the **CATS** button and the **RESULT** button to toggle between the List of Categories and the File Maintenance window on the display.

**Note**    If you only want to use one category in the filter, double-click its name in the List of Categories while there is no other category in the filter. The File Maintenance window appears automatically, showing the files tagged to that category.

## Tagging Files to Categories

When you select the filter mode (the **FILTER** button indicator shows green), Filer-Fax uses the filter shown in the filter window to produce a list of files in the File Maintenance window. You can then select files from this list and tag them to the categories included in the other filter (which you define for the *tag-cats mode*).

1.  Click the **TAG CATS** button.

2.  Click the **CATS** button to show the List of Categories.

3.  Select one or more categories to which you want to tag files. These appear in the filter window on the left.

4.  Click the **FILTER** button.

5.  Click the **CATS** button to show the List of Categories.

6.  Select categories and use logic buttons to define a filter; this should give you a list of files in the File Maintenance window that includes the one(s) you want to tag.

7.  Select one or more file(s).

**Note**    Clicking the **Multi** button enables you select more than one file.

8.  Click the **Tag** button.

**Note**    Each time a filter definition changes, the File Maintenance window appears showing the file list that results from applying the filter. Click the **CATS** button if you want to see the List of Categories; click the **RESULT** button to show the file list.

### Untagging Files from Categories

When you select the tag-cats mode (the **TAG CATS** button indicator shows green), the File Maintenance window shows a list of files tagged to the categories shown in the filter window. You can select files from the list and untag them from these categories.

**1.** Click the **TAG CATS** button.

**2.** Check the File Maintenance window appears; if necessary, click the **RESULT** button.

**3.** Select one or more files you want to untag.

**Note**     clicking the **Multi** button enables you to select more than one file.

**4.** Click the **Untag** button.

### Finding File Information

**1.** Select a file.

**2.** Click the **Request Information** button (the one with the question-mark icon) to display the File Information window; alternatively, press **F2** on your keyboard.

**3.** Use your keyboard if you want to enter information in the Notes window.

### Previewing a File

**1.** Select a file.

**2.** Click the **Preview** button (the one with the screen icon) to view a MiniPic in the File Preview window; alternatively, press **F4** on your keyboard.

### File Security

**1.** Select a file.

**2.** Click the **File Security** button (the one with the padlock icon) to display the File Access Status window; alternatively, press **F5** on your keyboard.

**3.** Click the **Delete** buttons to select deletion rights for the file.

You can view the File Information, File Preview and File Access Status windows simultaneously by sizing and moving the windows to suitable positions on the screen. The information changes as you highlight different files in the File Maintenance window.

*Figure 194. Typical Screen Showing Simultaneous Viewing*
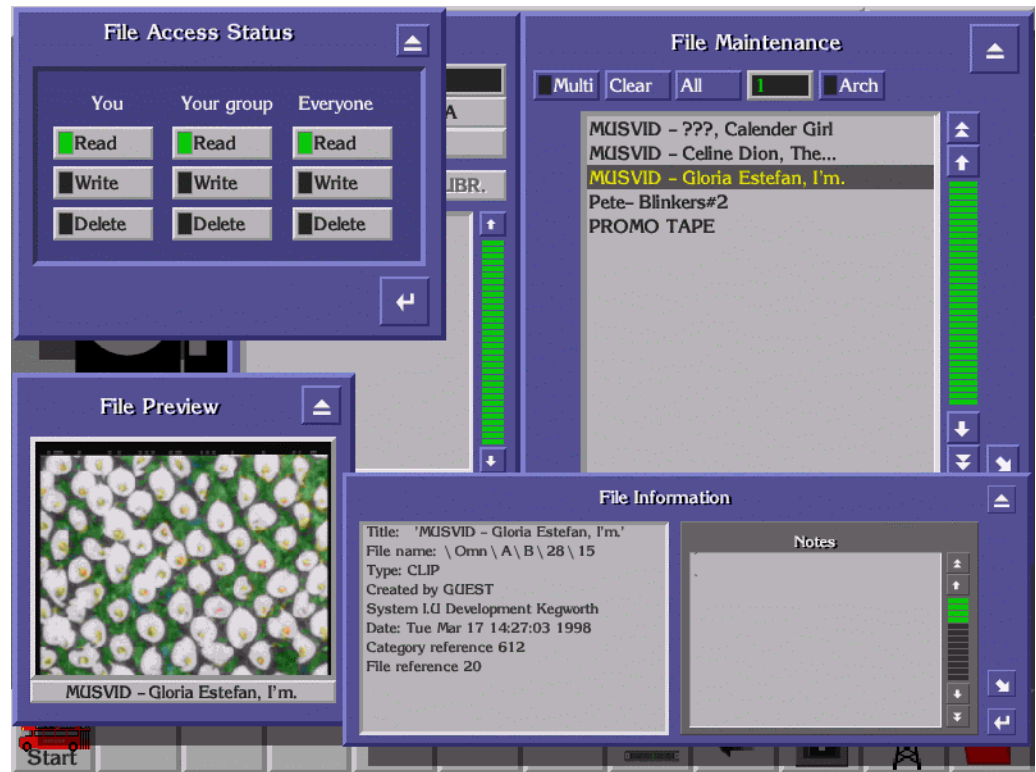


## Deleting Files

**1.** From the file list select the file(s) you want to put in the dustbin.

**2.** Click the DUSTBIN icon (or press **F1**).

## SQL Search

Use the **SQL** button to perform a keyword search. The system searches for and displays files that match a keyword that you enter. You can use the AND, OR and NOT buttons to narrow the search.

**1.** Select the filter mode: click the **FILTER** button.

**2.** In the filter window define the filter you want to use for the search.

**3.** Click the **SQL** button to display the SQL Query Entry window.

*Figure 195. SQL Query Entry Window*
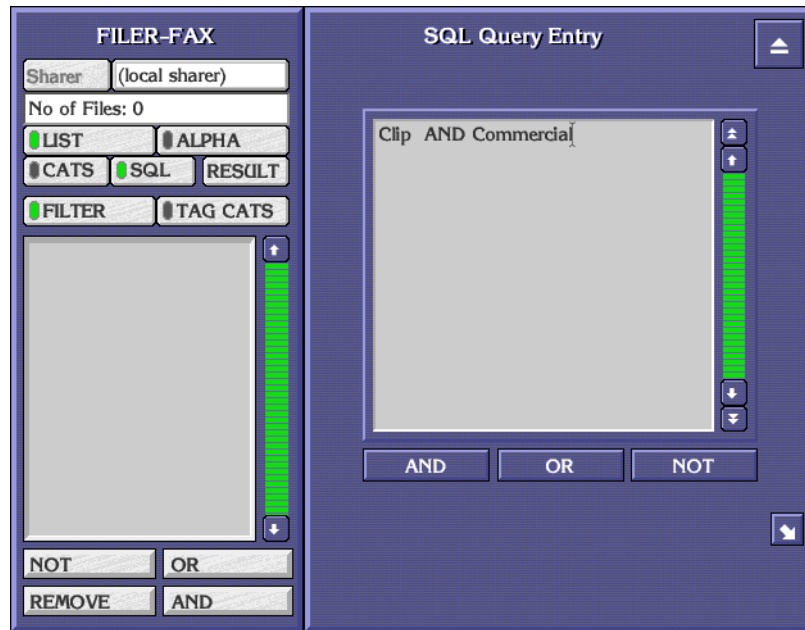


4. Enter one or more keywords in the window; link them with the logic operators (AND, OR, NOT).

5. Click the **RESULT** button. Filer-Fax performs the search and displays the result in the File Maintenance window.

## Save Mode

When saving a file from within another application, the Filer-Fax displays the Save Screen. The filter window shows the categories to which the file is tagged; the Save Area is displayed on the right.

*Figure 196. Typical Save Screen*
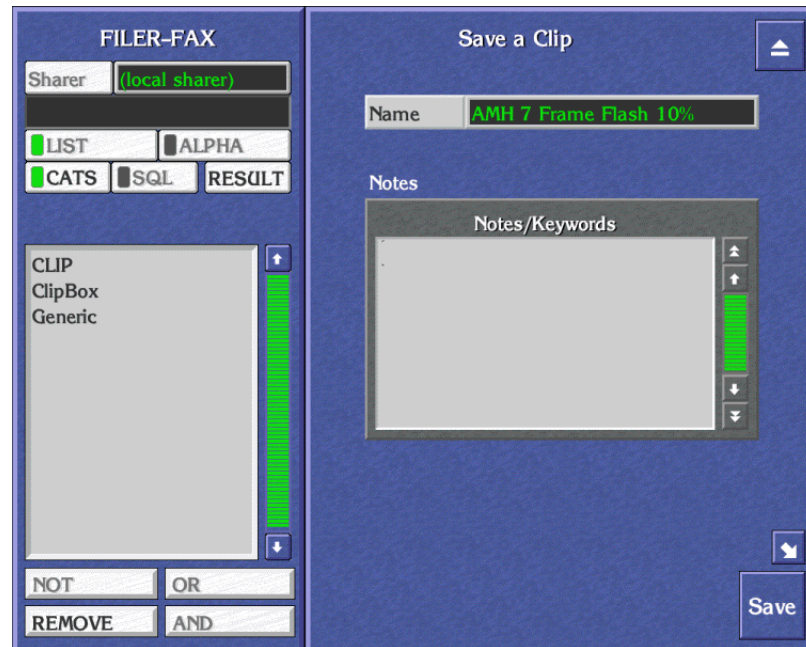


### Saving a file

1. Click the **Name** button.

2. Enter a name on the displayed Keypad. The system displays the name on the **Name** button.

3. In the Notes Area, enter any useful information you want to associate with the saved file. You can tag further clips to the category if you want.

4. Click the **Save** button to save the file. The Filer-Fax Save Screen disappears.

## Load Mode

When you load a file while using an application the Filer-Fax Load Screen is displayed.

*Figure 197.  Typical Load Screen*
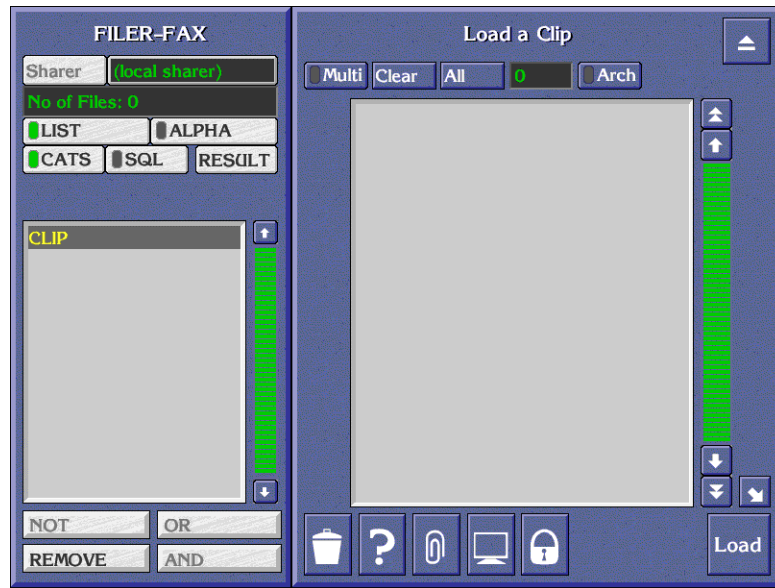


## Loading a file

**1.** Find the file you want to load using the filter if necessary (see *Filtering on page* 324) and highlight it.

**2.** Click the **Load** button.

## Exiting the Filer-Fax

You may exit the Filer-Fax at any time by clicking the Eject icon in the top right corner of the screen.

# Filer-Fax Memory

If you exit the Filer-Fax or switch to another application, some details are remembered by the Filer-Fax (unless the OUI workstation is switched off):

**1.** If the List of Categories or the File Maintenance List is displayed, and the items in the list.

**2.** If the **ALPHA** indicator button is selected and an **Alpha-Selection** button.

**3.** Whether the **FILTER** or **TAG CATS** button is selected.

**4.** The categories displayed in the filter.

# Pager

## Overview of OmniPager

The Local OmniPager is a standard feature on every Encore Operational User Interface (OUI) workstation. It is a very simple mailing system that enables OUI workstation users to send and receive short messages via the Encore Network. Messages can be sent according to the category of the required Destination(s): Station, User, Area or Broadcast.

**Station** — message is sent to a specific OUI workstation, regardless of who may be currently logged on there.

**User —** message is sent to an individual user at whichever OUI workstation that user is logged on.

**Area —** message is sent to all users at OUI workstations within a predefined or pre-configured work area.

**Broadcast —** message is sent to all OUI workstations on the Encore Network.

The configuration of OUI workstations according to their specific work areas and their individual identities is established by the System Administrator.

**Note**    The Local OmniPager does not use mailboxes and does not keep a record of transmitted and received messages. It does not advise the sender if the destination OUI workstations are switched on or if the intended recipients are logged on. Furthermore, messaging is restricted to the Encore Network; it does not encompass the Internet or any other mailing system.

## Opening OmniPager

Click the Local OmniPager icon on the OUI Task Bar.

**PAGER**

## Messaging

When you load the Local OmniPager application, the Send Message screen is displayed.

*Figure 198.  Send Message Screen*



## Sending a Message

**1.** Select the destination category from **BROADCAST** (Default), **AREA**, **USER** and **STATION.**

**2.** If you select the **AREA**, **USER** or **STATION** button a list window is displayed so that you can select the exact destination: the destination appears in the **To** window.

**3.** Type your message using the Keyboard; the text appears in the Message Area.

**4.** Click the **Send** button. The Send Message screen disappears.

**Note** If at any stage you wish to abort without sending a message, click the **Eject** icon in the top right of the OmniPager screen.

## Receiving a Message

If you receive a message at an OUI workstation, the Incoming Message screen appears and overlies whatever is currently displayed.

*Figure 199.  Typical Incoming Message Screen*
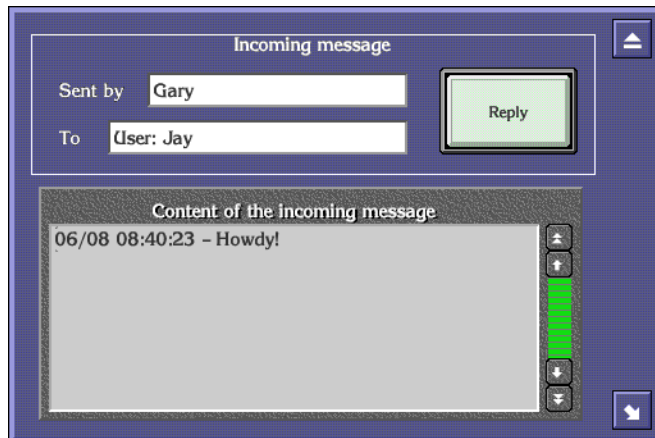


The **Sent by** window shows the origin of the message; the **To** window shows the destination category.

## Replying To a Message

**1.** Click the **Reply** button.

**2.** The Send Message screen appears with the destination already displayed in the **To** window.

**3.** Type your reply using the Keyboard; the text appears in the Message Area.

**4.** Click the **Send** button.

## FilerFax Shortcut Keys

Shortcut keys are keys on your workstation keyboard which you can press instead of using the mouse to click buttons on the screen. The position and functionality of these keys for the Filer-Fax are shown in Figure 200.

**Note**     If you are not using a UK Keyboard, the keys found in the same position as those detailed have the same shortcut functionality.

*Figure 200.  Shortcut keys for the Filer-Fax*

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## Numerics

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## M